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THE COST OF DOMESTIC VIOLENCE TO THE
HEALTH CARE SYSTEM

EXECUTIVE SUMMARY

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INTRODUCTION

Domestic violence has emerged as a major public issue in recent years. It exacts a major toll on the victims and their **families** as well as on American society. Domestic violence has significant **consequences** for the health care, social service and **criminal** justice systems. Battered women have more physical health problems, higher utilization of health care services, higher levels of depression, drug and alcohol **abuse**, and suicide attempts than nonabused women. The medical care costs, social service costs, criminal justice costs, lost productivity, and the losses due to premature death are high, but not easily quantifiable.

There is a vast literature addressing the issues relating to domestic violence. This review focuses on the literature relevant to developing estimates of the economic costs of domestic violence. Covered are the studies that estimate cost of domestic violence and costs related to other types of violence against women, studies of the prevalence of domestic violence, and studies that analyze the mental health consequences of domestic violence, including methodological approaches. The focus is on literature published during the last five years. Studies were identified by **performing** a Medline database search for studies of the prevalence, incidence, or cost of domestic violence. Additional studies were located **from** the reference lists and through other related methods.

METHODOLOGY

Estimates of the prevalence and incidence of domestic violence can be **affected** by the methods used to derive them. Below we examine issues of sample design, prevalence versus incidence, defining and measuring domestic violence.

Sampling Issues

All national estimates of the prevalence and incidence of domestic violence come **from** survey self-reports (**Koss et al.**, 1994). Consequently, they exclude persons not at home when interviewers call and women who are not willing to answer the telephone or come to the door for strangers. It is reasonable to **speculate** that abused women may be **more' fearful** of attacks by strangers, or, more likely, may be prevented by controlling, abusive partners **from** talking with interviewers about any topic. National surveys also typically exclude those who do not speak

English fluently, the very poor, military **families** living on base, people with particularly chaotic lives, and homeless, hospitalized, institutionalized, or incarcerated persons (**Browne, 1993; Koss et al., 1994**).

Underreporting can also result when others are present at the time of the interview (**Koss et al., 1994**), **particularly** the abusing partner who is **frequently** controlling.

Prevalence versus Incidence

Two approaches can be used to measure the number of victims of domestic violence: prevalence and incidence. Prevalent cases include all those who were abused in a given time period, most **often** a year, regardless of whether these were new cases or ongoing abusive relationships. Incident cases include only the new cases occurring within a given time period. For measuring the impact of most **illnesses**, prevalence and incidence can be **identified**, and depending on the purpose of the analysis the appropriate measure can be used. However, the distinction between prevalence and incidence is often unclear in the context of domestic violence. Many surveys query as to abuse during the last year, but do not ask **if the** abusive relationship is new (i.e. incident) or ongoing (i.e. prevalent). For this reason, we have found it **difficult** to distinguish between the two measures in the literature and our discussion focuses on prevalence because we believe that this is probably what is being measured.

Definitional Issues

Definitions of domestic violence have obvious effects on prevalence estimates. Other things being equal, the more inclusive the **definition**, the higher the prevalence rate. The term “domestic violence” requires definitions of both the partner and the type of violence to the extent that it is restricted to violence between partners (**Gelles, 1990; Stark & Flitcraft, 1991**).

Violence, and the related terms **aggression**, **abuse**, and **battering have** been defined in several ways. According to Koss et al. (**1994**), Webster’s New *World Dictionary of the American Language* defines **violence as** “physical force used so as to injure, damage, or destroy; extreme roughness of action; intense, often devastatingly or explosively powerful force or energy, as in a **hurricane** or volcano; great force or strength” (p. 62). Straus (1991, p. 18) defines violence as “an act carried out with the intention or perceived intention of causing physical pain or injury to another person.” Gelles (1990, p. 52) distinguishes between violence and aggression, proposing that “violence refers to a physical act, [whereas] aggression refers to any malevolent act that is

intended to hurt another person” whether physically or emotionally. However, Murphy and Cascardi’s (1993) definition of aggression as “behavior intended to produce injury or harm” (p. 86) closely resembles **Straus’s** (1991) definition of violence. -Aggression has been classified by bodily mode of expression; e.g. verbal vs. physical (Murphy & Cascardi, 1993).

In research on abuse -- a term more typically connoting violence among persons known to one another, particularly those in intimate relationships -- violence is **frequently classified** as physical, sexual, or emotional (Murphy & Cascardi, 1993). Both physical and sexual abuse fit within the categories of physical violence to the extent that the intent of sexual abuse is physical injury and not exclusively humiliation. This contrasts with Murphy and Cascardi’s (1993, p. 87) opinion that although aggression refers to behavior, abuse “refers to harmful or potentially harmful effects of behavior as well (as the abusive behavior **itself**)”. The prevalence of family violence depends on “which behaviors are included and excluded in the definition of what constitutes abuse” (Miller, 1991, p. 8). Stark and Flitcraft (1991) use the terms “spouse abuse” and “interspousal violence” interchangeably to refer to “the use of physical force in **intimate** relationships among adults” (p. 123). They contrast these with battering’ which they **define** as “a syndrome of control and increasing entrapment attendant upon spouse abuse” (p. 123) -- termed “psychological abuse” by others.

Definitions of partners may also vary. These definitions vary along at least two dimensions, which are roughly orthogonal. We will refer to these as relationship and temporal dimensions. With respect to the relationship dimension, partners may share a **kin relationship**; i.e. they are related by marriage. In other cases, they may not be spouses, but they may share a **domestic relationship**; i.e. they live together in the same household (Gelles, 1990). In the broadest case, they may have an **intimate relationship**; i.e., they **"know** each other in a close personal way” (Gelles, 1990, p. 53). It is thought that the use of narrower definitions biases prevalence estimates downward (Miller, **1991**). **With** respect to the temporal dimension, definitions of domestic violence may include current partners (i.e., those who are currently married to each other, currently live together, or currently have an intimate relationship) or past partners (e.g., those who have divorced or separated, women being stalked by former husbands or dates, etc.). At least some legal definitions include the father of a woman’s **child** as a perpetrator of domestic violence even if the two adults do not live together (**R.** Huppert, 1995, personal

communication); presumably, this **definition** assumes that the two adults had an intimate relationship (whether or not it was a kin or domestic relationship) at some time. **Because** health **care** providers are concerned with **future** health risks (which are probably **the most** relevant indicator of total health costs), they are concerned with assaults by any social partner (Stark & Flitcraft, 1991).

Measurement Issues

There are many potential ways to operationalize, or measure, even a single definition of domestic violence. Different choices in this process may result in different prevalence estimates.

The National Family Violence Surveys (conducted in 1975 and 1985) and the National Crime Victimization Surveys (conducted annually) are the main source of existing estimates of the nationwide prevalence of domestic violence (Koss et al., 1994).

The National Crime Victimization Survey questions refer to criminal victimization. The use of these questions to estimate the prevalence of domestic violence depends on the assumption that women will think of assaults by husbands or partners as belonging in the category of “crimes.” **Because** this assumption is **often** inaccurate, these surveys are thought to underestimate the prevalence of domestic violence (Koss et al., 1994; Straus, 1990).

The National Family Violence Surveys measured domestic violence using the Conflict Tactics Scale (CTS;), which is the most widely used measure of domestic violence (Straus, 1990). This scale contains items assessing three hypothesized dimensions: reasoning, verbal aggression, and physical aggression (Straus, 1990). Several researchers have reported adequate reliability and validity for this scale (Gelles, 1990; Straus, 1990). The scale has proved **useful** in documenting the remarkably high prevalence of domestic violence in the United States (Murphy & Cascardi, 1993; Straus, 1990).

However, this scale has several limitations. Instructions to respondents **frame** the issue in terms of conflict management. This **framework** enhances its acceptability to respondents, but **carries** with it the possibility of losing data on violence that was not seen as part of a disagreement or **conflict** (Straus, 1990). However, informal data **from** the surveys suggest that such acts were reported in spite of the instructions, at least some of the time (Straus, 1990). Its close-ended list of violent acts is not exhaustive. Within this list, many acts may have multiple meanings; e.g., one item refers to kicking, but “kicking a man in the, shins . . . is not the same as kicking a man ‘in the

groin, and both of these instances are distinct **from** kicking a pregnant woman in the abdomen” (Straw, 1990, p. 53). These behaviors may have different intentions and different effects (Murphy & Cascardi, 1993). **One** source of potential differences in meanings is that the scale measures violent acts, but does not measure their consequences, e.g. the occurrence and severity of injuries (Browne, 1993; **Gelles**, 1990; Koss et al., 1994). This is particularly important because the consequences of the same acts may **differ** for women and men: “the potential for severe bodily harm of being kicked... by a typical unarmed man versus a typical unarmed woman cannot be simply equated” (Browne, 1993, p. 1078; **cf.** Koss et al., 1994). Respondents are asked about violent acts over the past 12 months; they may not recall some events during this time frame (**Gelles, 1990**), or they may recall an event but recall its timing incorrectly (Cannell, Fisher, & Bakker, 1965). The authors of the instrument acknowledge that this probably results in underreporting of domestic violence, particularly less severe violence; however, they also point out that data would be extremely skewed if a short time **frame** were used (Straus, 1990). Finally, the scales do not assess the context in which the violence occurred, such whether it represented self-defense, and the strength and size of the perpetrator and victim (Gelles, 1990; Straus, 1990). Straus (1990) favors separate measures of context.

PREVALENCE ESTIMATES

In this section of the report, we divide the recent literature on prevalence into four areas: national surveys on family violence, studies that are based on the national crime surveys, studies based on small samples from one hospital or community, and studies that focus on domestic violence occurring during pregnancy. We give an overview of the literature on the prevalence of mental health consequences **of domestic violence**, but defer a more detailed discussion of this issue to a forthcoming report.

The literature on the prevalence of domestic violence is summarized in **Table 1**. Most of the studies were done in the United States, but included are two Canadian studies (Bland & **Orn**, 1986; Ratner, 1993). Detailed abstracts of these articles are provided in Appendix I.

National Surveys on Family Violence

Four large (**1,000+**) nationally representative surveys were reviewed. The Commonwealth Fund Survey of Women’s Health was conducted in 1993 and included 2,525 women and 1,000

men (Commonwealth Fund, 1993). Results indicate that during the **previous** year, 7 percent of women (3.9 million) who were married or cohabiting were physically abused, and 37 percent (20.7 million) were verbally or **emotionally** abused by their spouse or partner. **Plichta & Weissman** (1995) conducted a random household survey of 1,323 married or cohabiting women. They found that 8.4 percent had been physically abused by their partners in the previous **year**, and 3.2 percent had been severely abused.

Strauss and Gelles have conducted two National Family Violence Surveys aimed at estimating the prevalence of domestic violence disaggregated by sociodemographic parameters and at the state level. **In** 1975 they surveyed 2,143 couples (Strauss, 1990) and found that 12.1% of husbands and 11.6% of wives committed at least one violent act, and that 3.3% of husbands and 4.6% of wives committed at least one act of severe violence. Ten years later in a repeat survey of 3,520 couples (Straus, **1991**), the results were similar: 11.6% of husbands and 12.4% of wives reported committing violence against their spouse, and 3.4% of husbands and 4.8% of wives indicated that the incident was severe.

Estimates from the National Crime Surveys

Two national surveys conducted annually by agencies of the U.S. Department of Justice are used to estimate the prevalence of domestic violence. The Bureau of Justice Statistics conducts the National Crime Victimization Survey. Recent estimates indicate that 5.4 women per 1,000 are victimized each year by an intimate acquaintance (Bachman, **1994**), and 1.1 per 1,000 are victimized by a relative. **Of the** total of 600,000 victimizations of women per year, one third of these are victimized by relatives or intimates and 35% were victimized by acquaintances. The Federal Bureau of Investigation compiles the **Uniform** Crime Reports (U.S. Department of Justice, 1-1994). According to this dataset; 29 percent **of** female murder victims **- 1,531 -** were slain by husbands or boyfriends in 1993. 3 percent of male murder victims **- 538 -** were slain by wives of girlfriends.

Studies Based on Small Samples

The following studies are based on small samples **from** one hospital, clinic site, or community. They **differ** in terms of the demographics of the population included and are difficult from which to generalize.

Several studies have looked at rates of domestic abuse among female psychiatric patients:

- Carmen and colleagues (Carmen et al, 1984) reported that 22 percent of inpatients had been **physically** or sexually abused by their husbands or former husbands.
- Herman (1986) reported that 23 percent of psychiatric outpatients had been beaten by their husbands.
- 3-4 percent of women presenting to psychiatric emergency room services were found to be battered (Rounsaville & Weissman, 1977).
- A study of women referred for psychiatric services by a rural health clinic found that 50 percent of the women were victims of domestic violence (Hilberman & Munson, 1977).

A number of studies have looked at the rates of violence against women who are married or living with partners:

- Estimates of the rate of abuse during a one year time period range 8.4 percent (Plichta & Weissman, 1995), to 10.6 percent (Ratner, 1993), to 22.7 percent (Hamberger et al, 1992), to 33 percent (McKentry et al, 1995).

Other findings include:

- Hamberger et al (1992) found that 13.3 percent of women were injured as a result of domestic abuse during the previous year. They estimate that during their lifetimes, 38.8 percent of women are abused, and 24.7 percent are injured.
- Frieze et al (1980) reported that 34% of a community sample of women had been assaulted by an intimate partner.
- 5.6 percent of inner city women seen in an ER were battered (McLeer & Anwar, 1989).
- In a study of women presenting in 5 ER's, 23 percent of those with current partners presented with **injuries**. **Of women without current** partners, 5.6% had experienced violence in the past 30 days. The lifetime prevalence of violence for **all** the women was 54.2%.
- One unusual study focused on offenders rather than victims, and estimated that 19.7 percent of adults were offenders (Bland & Orn, 1986).

Pregnancy

Table 2 summarizes the studies that estimate the prevalence of domestic violence during pregnancy. Estimates of physical or sexual abuse range **from** 7% in a large Boston study of low-

income minority women (Amaro et al, 1990) to 20% in a Baltimore study (O'Campo et al, 1994) to 38% in another Baltimore study (O'Campo et al, 1995). Several studies found rates of 10 to 20 percent (Parker et al, 1993; McFarlane et al, 1992; Campbell, et al 1992), with rates higher for teens than for adult pregnant women (Parker et al, 1993).

Based on data from the 1985 National Family Violence Survey, Gelies (1990) reports that the overall risk of violence during pregnancy is 35 percent greater than during nonpregnancy. However, he concludes that the association between pregnancy and violence is spurious and results from the impact of age. Regardless of whether or not the relationship is causal, it is clear that pregnant-women are often victims of domestic violence.

These studies differ in the size and representativeness of the sample and the type of abuse included. It is not surprising that the rates reported vary considerably. Studies consistently find that millions of women are victims of domestic violence each year.

Mental Health Consequences

The literature indicates that domestic violence is associated with:

- Depression (Campbell, 1989; Campbell et al, 1992; Campbell, et al, 1995; Cascardi & O'Leary, 1992; Gelies et al, 1984; Gelles & Harrop, 1989; Plichta & Weisman, 1995; Sato & Heiby, 1992; Walker, 1983; West, et al, 1990)
- Suicide ideation (Gelies & Harrop, 1989; Plichta & Weisman, 1995)
- Suicide attempts (Bergman & Brismar, 1991; Carmen et al, 1984)
- High rates of post-traumatic stress disorder in women victim&xi by their partners, with a range of 33 percent to 81 percent (Astin et al, 1993; Kemp et al, 1995; West et al., 1990).
- Rates of substance abuse in general ranged from 23 percent to 24 percent (J. C. Campbell et al., 1992; Carmen et al., 1984)
- Rates of alcohol abuse or dependence ranged from 15 percent to 29 percent (Bergman & Brismar, 1992; Ratner, 1993; Rounsaville & Weissman, 1977-78; Stark et al., 1981, cited in Stark & Flitcraft, 1991)
- Rates of drug abuse ranged from 9 percent to 16 percent (Rounsaville & Weissman, 1977-78; Stark et al., 1981, cited in Stark & Flitcraft, 1991).

This literature raises several issues that are discussed in depth in Part II of this report - *Exploratory Paper on Mental Health Consequences of Domestic Violence*.

COST STUDIES

Although there has been a growing awareness of the problem of domestic violence in recent years and its enormous toll on the victims, their families and **friends**, and on society, documentation of the costs of violence is very limited. Cost estimates translate the adverse effects of domestic violence into dollar terms, the universal language of decision makers and the policy arena. These estimates can be used to: (1) **define** the impact of domestic violence on health and social service delivery systems and on the productivity of the victims; (2) provide a basis for evaluating interventions; (3) provide a basis for policy and planning relative to health and social domestic violence control initiatives; and (4) provide an economic **framework** for program evaluation.

Estimates of the Cost of Domestic Violence

Table 3 summarized the studies relating to the cost of domestic violence. Straus (1986) estimated that domestic violence cost the nation \$1.7 billion annually based on data relating to intrafamily violence. This estimate has been frequently quoted as seriously underestimating the true cost of domestic violence. More recently, Meyer (1992) estimated the losses due to domestic violence between **\$5-** \$10 billion annually, also regarded as underestimate and based on limited and questionable data (Institute for Women's Policy Research, 1995).

The most recent estimates of the cost of domestic violence against adults have been made by Miller, Cohen, and Wiersema (1995) as part of a larger study of Crime in the United States. Total **costs of** domestic violence are estimated at **\$67** billion in **1993**, **accounting** for almost 15 percent of total crime costs- \$450 billion. These are obviously very high estimates. The cost estimates include out-of-pocket expenses such as medical bills and property losses (\$1.8 billion), productivity losses at work, home, and school (**\$7** billion), and **nonmonetary** losses such as pain, suffering, and lost quality of life (\$58 billion). Thus, the nonmonetary losses comprise 87 percent of the total estimated costs of domestic violence. These nonmonetary costs are based on the willingness-to-pay approach to estimating the cost of illness rather than the human capital approach, briefly described below:

Human Capital vs. Willingness-To-Pay Approaches

Economists generally employ two approaches to valuing human life. **One** is the **human capital** approach, **refined** by Rice (1966) and her colleagues (Rice et al., 1985); the second is the willingness-to-pay approach, first proposed by **Schelling** (1968) and **Mishan** (1971). In addition, there have been attempts to further **refine** these methods and link them together (**Landefeld** and **Seskin**, 1982).

In the human capital approach, a person is seen as producing a stream of output that is valued at market earnings and the value of **life** is the discounted future earnings stream. Morbidity and mortality destroys labor, a valuable economic resource, by causing persons to lose time and effectiveness from work and other productive activities, forcing them out of the labor force or resulting in premature death. Disease thus creates an undeniable loss to individuals and society, and it is this loss that the human capital approach attempts to measure (**Hodgson** and **Meiners**, 1982). This method has some disadvantages. Because it values life using market earnings, it yields very low values for children and the retired elderly. It also undervalues life **if labor** market imperfections exist and wages do not reflect true **abilities**. In addition, psychosocial costs, such as pain and suffering, are components of the burden of illness omitted **from** the human capital computation of indirect costs.

The willingness-to-pay approach values life according to what individuals are willing to pay for a change that reduces the probability of illness or death. This method could be **helpful** in indicating how individuals value health and life, in deriving social preferences regarding public policy, and in assessing the burden of pain and suffering, which have an intangible quality not amenable to evaluation in terms of the monetary value of resources used or forgone. A review by **Robinson** (1986) makes a strong case that the willingness-to-pay method is a fundamentally “incorrect” method of valuing life for cost-effective public policy. Robinson concludes that it is subjective and suffers from circularity because the values placed by individuals on government health programs are clearly influenced by those policies.

Miller and his colleagues estimated \$2.7 million as the value of saving an anonymous **life**, which was derived **from** a synthesis of almost 50 published values, adjusted for the **differences** in expected life span of crime victims by type of crime. The nonfatal quality of life estimates come from regression analysis of jury verdicts. By comparison, the human capital approach, estimates

the present value of **future** earnings lost for people who die prematurely by taking into account life expectancy at the time of death for different age and gender groups, changing patterns of earning at successive age groups, varying labor force participation rates, an imputed value of for housekeeping services, and the appropriate discount rate to convert a stream of earnings into its present worth (Rice, et al, 1989). Thus, the estimated **values** of human life in 1992 employing a 2 percent discount rate ranged **from** \$2,450 for men aged 85 and over to \$1.4 **million** for men aged 20-24; for women, the **values** ranged from \$2,534 for those aged 85 and over to \$967,000 for women aged 25-29. These are **significantly** lower estimates of the value of life than the \$2.7 million estimated by Miller and his colleagues, who also used a 2 percent discount rate.

The human capital approach is still most **often** used in cost-benefit and cost-effectiveness analyses that seek to evaluate alternative demands for scarce **health** resources and promote economic rationality in health and social services policy, planning and management.

Evaluation of Domestic Violence Estimates

The costs of domestic violence were disaggregated by Miller, et al. (1985) by type of crime as follows: fatal crime- **\$12** billion, rape-25 billion, other assault- \$30 billion, and robbery - \$380 million. This study covers the costs of violent behaviors of all types, including domestic violence. Details on the estimation methods for domestic violence and sources of data are not described. The general approach used by the authors to estimating the costs of crime is to apply incidence estimates **from** survey data and literature reviews and to apply average costs or charges to obtain total costs. Nonmonetary costs, such as productivity losses, are based on lost workdays, lost housework days and lost school days and appropriate average values.

Multiple sources of data are used by **Miller** and his colleagues including Uniform Crime Reports, National Crime Victimization Survey, vital statistics data, National Violence Surveys, National Women's Study, 1993 Commonwealth Fund Survey of Women's Health, National Survey on Drug Abuse, US Statistical Abstract and various research studies. Without detailed descriptions on how these data are used, it is **difficult** to evaluate the methodology and the results.

DATA SOURCES

Estimating the costs of domestic violence requires several different types of national data. **These** data include reliable national estimates of the prevalence and incidence of domestic

violence, data on the type and severity of injuries and the number of deaths **incurred as** a result of domestic violence, medical and psychological care received as a result of incidents of domestic violence, **loss** and limitations of work and major activities as a result **of** domestic violence, numbers of arrests, court cases and convictions for acts of domestic violence, the numbers of individuals incarcerated and the length **of** incarceration as a result of acts of domestic violence. Below we examine the content of some of the sources of national data which can be used to calculate the costs of domestic violence. These data sources are **summarized** in *Table 4* and described in more detail in *Appendix II*.

Prevalence and Incidence Data

Estimates of the prevalence and incidence of domestic violence derived **from** existing national surveys are problematic. The National Crime Victimization Survey (NCVS) and the National Family Violence Surveys (**NFVS**) are the two national data sources which are **used to** generate estimates of the national prevalence of domestic violence. The methodological problems which create potential problems of reliability with these two surveys have been discussed in the above section on definition and measurement of domestic violence.

Injury Data

Very few national data sources provide data on injury and health care utilization resulting from acts of domestic violence. Data on injuries incurred as a result of domestic violence is limited to the National Crime Victimization Survey (NCVS) and the National Family Violence Survey (NFVS). The NCVS provides data on the type of injury incurred, whether health care was sought, where it was sought and whether the victim stayed overnight at the hospital. The NFVS provides data on whether injuries occurred, where and **how** many **times** medical care was sought, **and whether** the victim was hospitalized.

More detailed information on injury and health care utilization is necessary in order to generate a reliable estimate of the costs of domestic violence. There needs to be additional **information** on the severity of injuries, types and methods of treatment of injuries, and medications used as a result of injuries. Several national surveys do contain detailed **data** on health care utilization and injury, including the National Hospital Discharge Survey, the National Health Interview Survey, the National Ambulatory Care Survey, and the National Medical Expenditure Survey all collect data on health condition, injury and medical treatment.

Unfortunately none of the three data sources provide data about the circumstances which precipitated the injury so it remains impossible to link the type of injury with domestic violence as the source of injury.

Reliable data on death as a result of acts of domestic violence can be found in the Uniform Crime Reports (UCR). The UCR provides data on the relationship of victim to perpetrator in cases of homicide. The National Mortality Statistics report on homicide deaths but do not report on the circumstances.

There are almost no direct sources of data on the costs of medical care delivered as a result of injuries **from** domestic violence. The NCVS contains self-reported data by victims of insurance coverage and the medical expenses incurred as a result domestic violence injuries. These reports may have **reliability** problems since individuals **often** do not accurately report what is covered by other payers.

Work/Activity Loss Data

The NCVS provides data on employment status, kind of work, time lost from work as a result of injuries, wages lost as a result of injuries and criminal justice activities related to the incident of domestic violence, and time lost **from** work by household members as a result of the incident. Missing **from** the NCVS are data on limitations in major activities other than employment, effects on job performance, and data on extended disabilities. The NFVS provides imprecise data on the effects of domestic violence on a victim's **performance** on the job. Additional data on limitations in job performance and major activities are necessary for estimates of the indirect costs of violence to be reliable.

Law Enforcement and Criminal Justice Data

Data on police activity and court related activity due to domestic violence is scant. It is presently impossible to estimate the amount of police and court time and resources that are spent on incidents of domestic violence. There is no **specific** reporting system within the UCR which isolates assaults due to domestic violence **from** other types of assaults or arrests for acts of domestic violence. The **NFVS** provides data on victim reports of calls to the police, police response and actions, and arrests resulting **from** incidents of domestic **violence**.

The cost of police and court action most likely varies among jurisdictions according to whether or not domestic violence has been made a priority by the local law enforcement agencies,

With the development in many urban police departments of domestic violence task forces, it may be possible in the future to generate data on the amount of police time and activity spent on domestic violence incidents. There is also presently no reliable data on the number of court cases involving incidents of domestic violence or the length of time to adjudicate such cases. Detailed information is available on incarcerations due to domestic violence from the Bureau of Justice Statistics report on violence between intimates.

Data Needs

Several existing data sources, if **revised**, could provide important data for the calculation of the cost of domestic violence. First, estimates of the prevalence and incidence of domestic violence obtained **from** the NFVS would be strengthened by adapting methodologies which can expand inclusion criteria to include individuals who are not married or cohabiting and improve the likelihood of reporting of experiences of domestic violence. Changes in the NCVS would help to produce more reliable data by asking directly about incidents of domestic violence. However, unless the NCVS can increase the percentage of face-to-face interviews; the problem of lack of reporting of incidents of domestic violence due to the presence of a spouse or intimate during the interview will continue to be a problem. More reliable and specific data on the type and severity of injuries resulting from acts of domestic violence should be integrated into any surveys of domestic violence. More **specific** data which link these injuries to patterns of health care utilization and which **identify** specific procedures, treatments and medications which are used to treat these injuries are needed. The Survey of Violence Against Women now being conducted will potentially provide some of the necessary missing data . **This survey** includes more detailed questions about health care utilization and treatment procedures. Additionally, the Survey on Violence Against Women will provide more extensive data on activity losses.

Criminal justice studies of violence need to measure domestic violence specifically and collect information on the course of cases of domestic violence in the criminal justice system. The **Survey on Violence Against Women** will provide more extensive data on law enforcement and criminal justice activity related to incidents of domestic violence.

CONCLUSION

This review has focused on the existing literature and data sources relating to estimates of prevalence and cost of domestic violence. It has revealed considerable literature relating to all aspects of **domestic** violence that encompass a wide range of prevalence estimates, definitions, and measurement issues. The literature review also indicated that there are limited data sources on **severity** of injuries due to domestic violence, its mental health consequences, and a remarkable lack of data on costs. It is clear that there is a need to **quantify** the cost of domestic violence and its burden on American society. No one source of data can provide these cost estimates.

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Table 1. Prevalence of Domestic Violence

<u>Citation</u>	<u>N</u>	<u>Sampling frame</u>	<u>Location</u>	<u>Prevalence of domestic violence</u>
Abbott et al., 1995	648	Women presenting in 5 Ers	Denver	<p>Women with current male partner: Acute violence = 11.7% 23% of them presented for injuries</p> <p>Women without current partners: 5.6% experienced violence in past 30 days</p> <p>Entire sample: lifetime prevalence • 54.2%</p>

Backman, 1994	400,000	Random Survey	National Crime Victimization Survey	Against women: 572,032 violent victimizations per year or 5.4 per 1,000 intimates Against men: 49,032 incidents or .5 per 1,000 intimates
Bland & Om, 1986	2000	randomly selected adults	Edmonton, Alberta, Canada	19.7% were offenders (gender-specific rates not given, and victims not identified)
Carmen et al, 1984	188	discharged psychiatric inpatients (adult and adolescent)	NS	22% of patients had been abused (physically and/or sexually) by husband or former husband [5 1% of 80 abused patients]
Commonwealth Fund	2,525 women 1,000 men	Men and women sampled nationally	National survey	Within last year: 7% of married or cohabiting women (3.9 million) were physically abused , 37% (20.7 million) verbally or emotionally abused. Within last 5 years: 2% (1.9 million) women were raped

Frieze et al., 1980, cited in Koss et al, 1994	NS	community women selected in an attempt to find a control sample for a nonrandom group of 137 battered women in shelters, filing legal actions, or responding to advertisements	NS	34% had been assaulted by an intimate partner
Hamberger et al, 1992	394	Women attending a clinic	Medium-sized midwestern city	During the last year, 22.7% were abused and 13.3% injured. Lifetime: 38.8% abused and 24.7% injured
Herman, 1986	190	psychiatric outpatients	NS	23% of women had been beaten by their husbands
Hilberman & Munson, 1977-78	60	women attending a rural health clinic and referred for psychiatric evaluation	NS	50% of the women were victims of domestic violence
McKenry et al., 1995	102	maritally distressed couples	NS	33.3% (34/102) couples had at least 1 male-initiated violent incident in the past year
McLeer & Anwar, 1989	412	Innecity women presenting in ER	Pennsylvania	5.6% of women seen in ER were injured by battering

Plichta & Weisman, 1995	1324	married or cohabiting women 18-65 years old.	U. S. household random sample	8.4% had been physically abused by spouse or partner in the past year; 3.2% were severely abused (per CTS)
Ratner, 1993	406	randomly selected women ≥ 18 years old. who were married or cohabiting, or had been within the past year	Edmonton, Alberta, Canada	10.6% reported physical abuse; 13.1% reported psychological abuse
Rounsaville & Weissman, 1977	37	Battered women presenting in the emergency room	New Haven, CT	3.8% of surgical admissions in the ER and 3-4% presenting to psychiatric services were battered
Russell, 1982, cited in Koss et al., 1994	930	randomly selected women residents	San Francisco	21% of the subset who were currently or formerly married reported at least one incident of physical violence by male partners
Straus, 1990 ("Social stress and marital violence in a national sample of American families")	2143 couples	1975 survey	U.S. national sample	12.1% of husbands and 11.6% of wives committed at least one violent act; 3.8% of husbands and 4.6% of wives committed at least one act of "severe" violence

Straus, 1991	6002	1985 survey	U.S. national sample	11.6% of couples reported husband-to-wife violence in past year (3.4% severe husband-to-wife violence); 12.4% reported wife-to-husband violence (4.8% severe wife-to-husband violence). 30% reported some violence over the course of the marriage.
White & Koss, 1991, cited in Koss et al, 1994	2602	women at 32 colleges & universities	various sites in the U.S.	32% had experienced physical, aggression from a date or other intimate partner

THE COST OF DOMESTIC VIOLENCE TO THE
HEALTH CARE SYSTEM

FINAL REPORT

April 19, 1996

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PART I

**THE COST OF DOMESTIC VIOLENCE TO THE
HEALTH CARE SYSTEM**

A REVIEW OF THE LITERATURE

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criminal justice activities related to the incident of domestic violence, and time lost from work by household members as a result of the incident. The *Survey on Violence Against Women (SVAW)* provides data on days lost from paid employment, household activities, school, volunteer work, and social/recreational activities. Additional data on limitations in job performance and major activities are necessary for estimates of the indirect costs of violence to be reliable.

- **Law Enforcement and Criminal Justice Data** - Data on police activity and court related activity due to domestic violence is scant. It is presently impossible to estimate the amount of police and court time and resources that are spent on incidents of domestic violence. There is no specific reporting system within the *UCR* which isolates assaults due to domestic violence from other types of assaults or arrests for acts of domestic violence. The *NFVS* provides data on victim reports of calls to the police, police response and actions, and arrests resulting from incidents of domestic violence.
- **Incarcerations** - Detailed information is available on incarcerations due to domestic violence from the Bureau of Justice Statistics report on violence between intimates.

Application of the Model

Following is a detailed description of the recommended approach for estimating the cost of each component and the best available data sources available.

- **Hospital Care.** Both the *NCVS* and the *SVAW* should be used to estimate the use of hospital services for domestic violence-related injuries. It would be important to obtain information from both these sources and to compare the results. The advantage of the *NCVS* is that data on hospitalizations, total medical expenses, and domestic violence are available from this source and the sample is larger than the *SVAW*. The latter survey, however, is specifically designed to develop national estimates of violence against women and has data on hospitalizations. The *NMES-II* (updated) or *Hospital Statistics* should be used for per diem costs. The *NHDS*, in conjunction with the *NMES-II* (updated) or *Hospital Statistics*, should be used to estimate the cost of hospitalizations for substance abuse and a proportion of these costs should be attributed to domestic violence.

- **Physician Services.** The *NAMCS*, *NCVS*, and the *SVAW* should be used for estimating the expenditures for physician services associated with domestic violence. *NAMCS* has excellent data on ambulatory care visits; *NCVS* has data on visits, total medical expenses, and domestic violence; while *SVAW* has data on domestic violence and medical visits. Data from the American Medical Association or the *NMES-II* (updated) should be used for per visit costs.
- **Emergency Department (ED) Visits.** The *NHAMCS*, *NCVS*, *NMES*, and the *SVAW* should be used for estimating the expenditures for ED visits resulting from domestic violence. *NHAMCS* could provide national data on the prevalence of ED visits; *NCVS* has data on ED visits, total medical expenses, and domestic violence; *NMES* has data on the charges for ED visits; and the *SVAW* has data on domestic violence and ED visits.
- **Hospital-Based Outpatient (OP) Visits.** The *NHAMCS*, *NCVS*, *NMES-II* (updated) and the *SVAW* should be used for estimating the expenditures for OP visits resulting from domestic violence. *NHAMCS* could provide national data on the prevalence of OP visits; *NCVS* has data on ED visits, total medical expenses, and domestic violence; *NMES* has data on charges for OP visits; and the *SVAW* has data on domestic violence and OP visits.
- **Other Professional Services.** The *SVAW* should be used to estimate the number of services used for each type of service. Alternatively, the *NHIS* could be used to obtain other professional services collectively. *AMES-II* (updated) should be used to estimate cost per service used.
- **Emergency Medical Services (EMS).** The *SVAW* should be used to estimate the number of domestic violence victims receiving emergency medical services, and the *NMES-II* (updated) should be used for unit costs.
- **Mental Health Costs.** The *SVAW* should be used for estimating expenditures for mental health costs associated with domestic violence. *SVAW* has excellent data on domestic violence and the number of times that the victim talked to a mental health professional. Unit cost data would be obtained from mental health professional associations and/or the *AMES-II* (updated).

- **Prevention and Research.** The CDC *Inventory of Services and Funding Sources for Programs Designed to Prevent Violence Against Women* should be used to estimate expenditures for prevention and research activities.
- **Social Service Costs.** The CDC *Inventory of Services and Funding Sources for Programs Designed to Prevent Violence Against Women* should be used to estimate expenditures for social services related to domestic violence. The 1996 *National Survey of Homeless Assistance Providers and Clients* (if available) and the *SVA W* can also be used for estimating costs of care for victims of domestic violence who are housed and served in shelters. A proportion of Title IV-E expenditures can be used to estimate the cost of domestic violence to the foster care system.
- **Criminal Justice Costs.** The *SVA W*, supplemented by the *NCVS* and *NFVS*, should be used as the primary data sources on the use of criminal justice services. Smaller studies should be used to estimate the cost of these services.
- **Indirect Costs.** The value of productivity should be estimated using the latest data available, at this time 1993. A productivity increase of 1 percent should be assumed, and future productivity should be discounted at 4 percent. Sensitivity analyses should be carried out at alternative discount rates.
 - **Morbidity Cost.** The *NCVS* and the *SVAW* should be used to estimate days of lost productivity. The *NCVS* can be used for work-loss days, and the resulting estimate compared to one derived from the *SVA W*. The *SVA W* can be used for time lost from work as well as other activities.
 - **Mortality Cost.** The *UCR* should be used for the prevalence of deaths from domestic violence. The present value of lost productivity by age and gender can then be applied to the deaths to estimate mortality costs.

Data Needs

Several existing data sources, if revised, could provide important data for the calculation of the cost of domestic violence.

- Estimates of the prevalence and incidence of domestic violence obtained from the *NFVS* would be strengthened by adapting methodologies which can expand inclusion

criteria to include individuals who are not married or cohabiting and improve the likelihood of reporting of experiences of domestic violence.

- Changes in the *NCVS* would help to produce more reliable data by asking directly about incidents of domestic violence. More reliable and specific data on the type and severity of injuries resulting **from** acts of domestic violence should be integrated into any surveys of domestic violence. More specific data which link these injuries to patterns of health care utilization and which identify specific procedures, treatments and medications which are used to treat these injuries are needed.
- Criminal justice studies of violence need to measure domestic violence specifically and collect information on the course of cases of domestic violence in the criminal justice system. The Survey on *Violence Against Women* will provide more extensive data on law enforcement and criminal justice activity related to incidents of domestic violence.

CONCLUSION

A number of conclusions emerge from this analysis:

- Domestic violence is far-reaching in its economic consequences, impacting the healthcare system, the mental health system, the social service system, and the criminal justice system.
- The data that are currently available **suffer** from several flaws which limit their usefulness for estimating the cost of domestic violence and necessitate a large number of assumptions in order to develop estimates.
- A number of **datasets** focus on the use of healthcare, including mental health services, but do not permit one to identify when the use of services results from an episode of domestic violence. Included here are the *National Ambulatory Care Survey*, the *National Health Interview Survey*, the *National Hospital Ambulatory Care Survey*, the *National Hospital Discharge Survey*, and the *National Medical Expenditure Survey*. The *National Hospital Ambulatory Care Survey* will contain questions about domestic violence beginning with the 1995- 1996 survey.

- Other **datasets** are derived from the criminal justice system, and contain good data on the incident and permit estimates of the number of episodes of domestic **violence**. However, these **datasets** do not contain data on the use of services and/or costs. Included here are the *National Criminal Victimization Survey*, the *National Family Violence Survey*, and the *Uniform Crime Reports*.
- Data are particularly lacking in the areas of social services and criminal justice services resulting from domestic violence.
- A new survey, the 1995 Survey of *Violence Against Women* being conducted by the Center for Policy Analysis in Denver, is very promising for estimating the prevalence of domestic violence and use of medical and mental health services. It is the only nationally representative survey that combines identifiable data on incidents of domestic violence with the resulting use of services including health, mental health, and social services. *SVA W* would need to be augmented with cost data obtained from other sources.

Figure 1. Lifetime Prevalence of Domestic Violence (%)

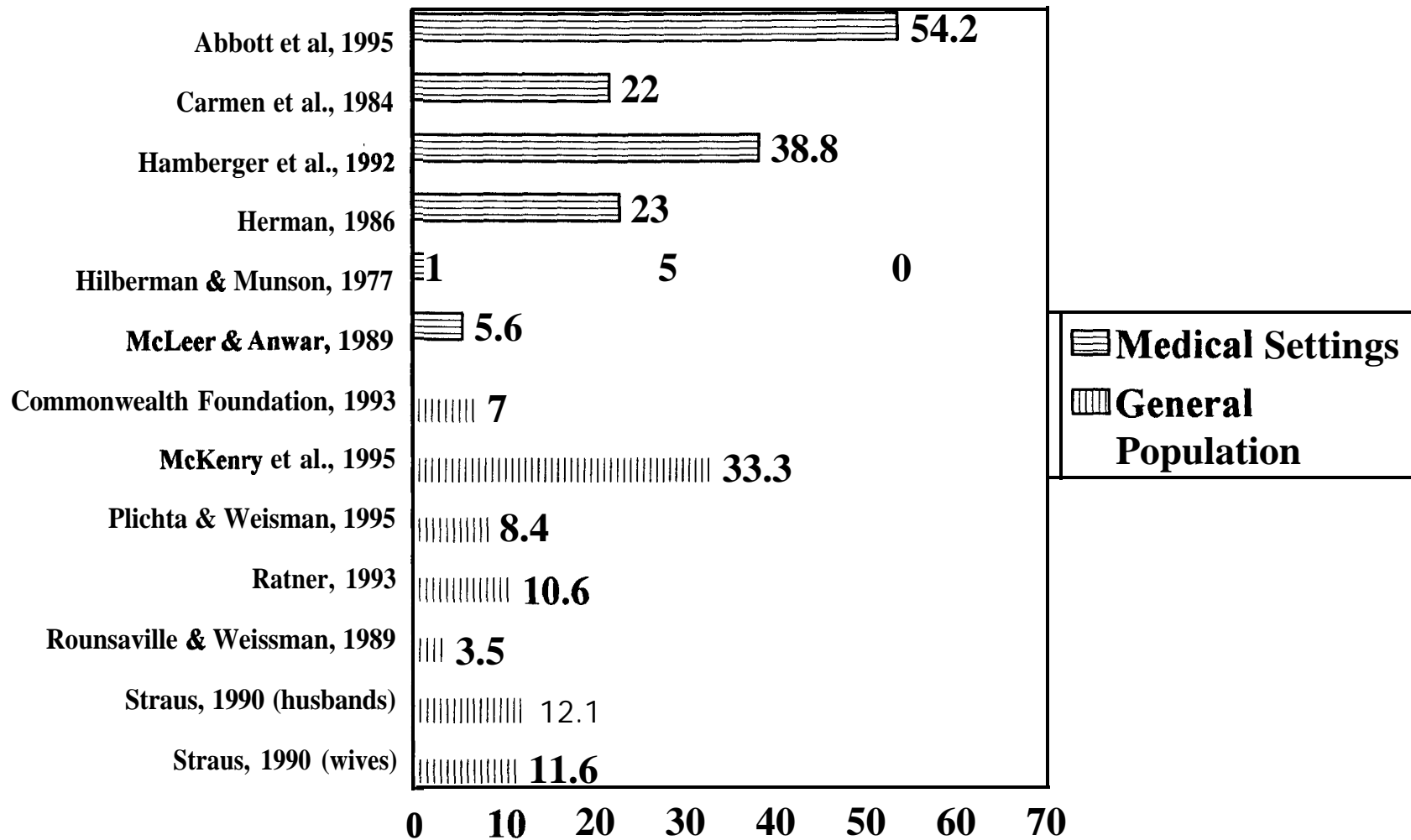
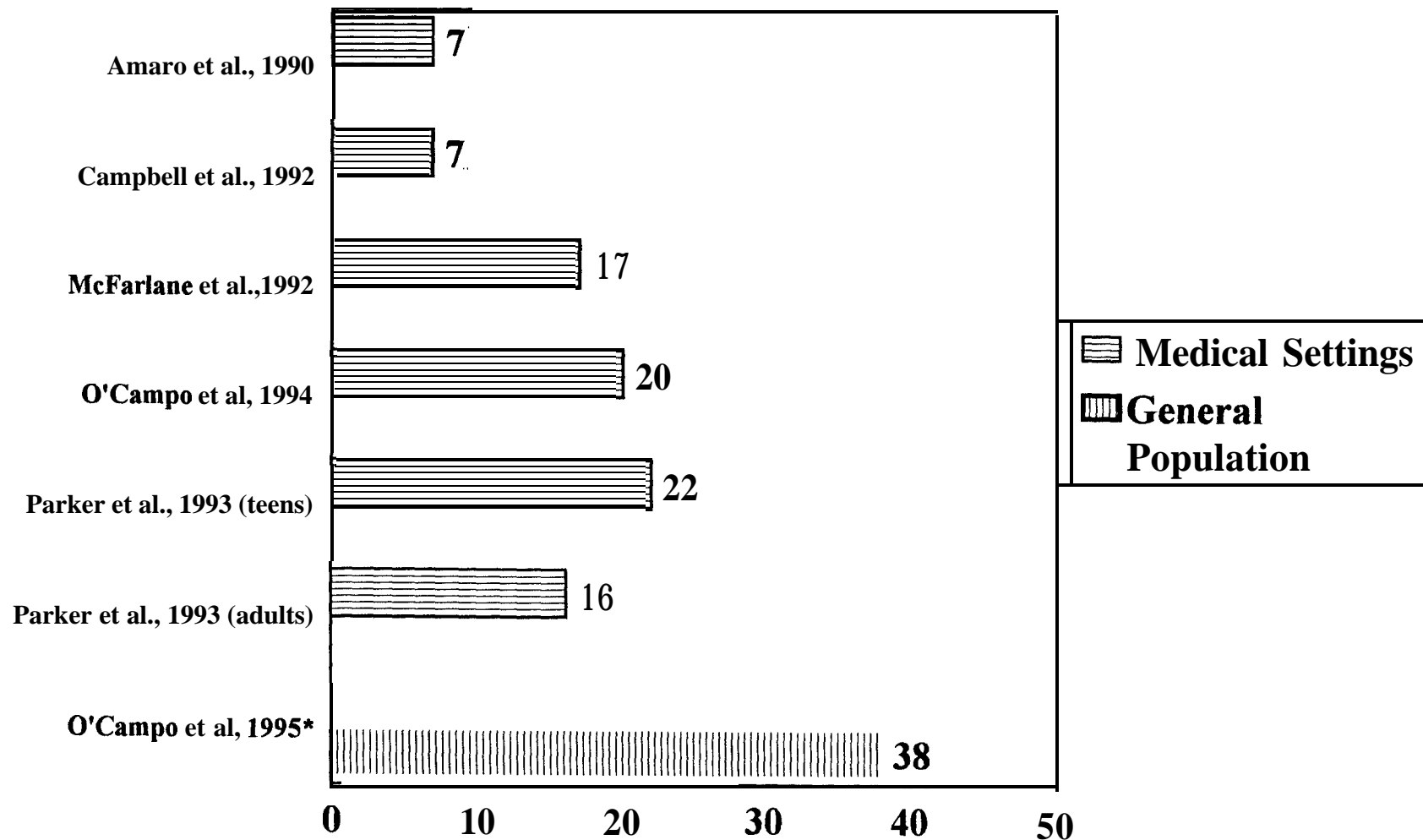


Figure 2. Prevalence of Domestic Violence During Pregnancy (%)



***Includes verbal abuse**

Table 2. Prevalence of Domestic Violence During Pregnancy

<u>Citation</u>		<u>Location</u>	<u>Sample</u>	<u>Measure of Domestic Violence</u>	<u>Prevalence</u>
Amaro et al., 1990	1,243	Boston	Women recruited from prenatal clinics, primarily low-income minorities	Asked: "Were you physically threatened or abused, or were you involved in any fights or beatings?"	7% reported physical or sexual violence during pregnancy; an additional 3% during 3 months prior to pregnancy
Campbell, et al, 1992	488	midwest	5 hospitals in a metropolitan area, mostly Medicaid postpartum women	Battering questions from the <i>March of Dimes Protocol of Care</i>	11.2% at some time, 7% by partner during pregnancy, 1.2% by others during pregnancy
Gelles, 1990	6,002	National Survey	1985 Second National Family Violence Survey	Conflict Tactics Scale	Overall risk of violence during pregnancy is 35.6 times greater than during nonpregnancy
McFarlane et al, 1992	691	Houston and Baltimore	Patients at several urban prenatal public health clinics	Abuse Assessment Screen, Index of Spouse Abuse, Conflict Tactics Scale	17% of women reported abuse during pregnancy, 60% reported 2+ episodes
O'Campo et al, 1994	363	Baltimore	Women attending the Johns Hopkins Obstetrical clinic	Questionnaire including items from the CTS	65% of women experienced verbal or physical abuse, 20% experienced moderate or severe violence, 45% reported verbal abuse

O'Campo et al, 1995	182	Baltimore area	Low-income women in an urban area, personal and phone interviews	Conflict Tactics Scale, Census tract data, data from state of MD	38% of women abused by partners (including verbal abuse), calculated odds ratios for a number of individual and neighborhood-level variables
Parker et al, 1993	691	NA	Patients at several urban prenatal public health clinics	Abuse Assessment Screen, Index of Spouse Abuse, Conflict Tactics Scale	21.7% for teens and 15.9% for adult pregnant women.

Table 3. Studies of the Cost of Domestic Violence

<u>Citation</u>	<u>Type of Violence</u>	<u>Year</u>	<u>Cost in billions)</u>	<u>Comments</u>
Cohen et. al., 1995	Rape	1987	\$8.0	Cost of victimization: Includes direct medical and property costs, productivity losses, program administration, and pain, suffering, and quality of life (willingness-to-pay)
	Robbery		20.5	
	Assault		81.3	
	Rape	1987	1.6	Cost of society's response to violent behavior: Includes criminal justice-related costs and incarcerated offender productivity losses
	Robbery		6.0	
	Assault		9.1	
Gelles and Strauss, 1990	Spouse violence Child abuse	1985	NS	Bed days for assaulted women were double of those for other women. Mental health and non-medical costs may be greater than treating physical injuries.
Horn, 1992	Domestic violence	NA	NS	Battered women suffer devastating economic, physical, -and psychological consequences
Long et. al., 1983	Family violence	NA	NS	Mathematical modeling developed taking into account various factors that affect the level of family violence
McLeer and Anwar, 1989	Domestic violence	1976-77	NS	Develops a protocol that improves identification of women injured by battering

Miller, et. al., 1995	Total Domestic Violence	1993	<u>67.4</u>	Domestic violence costs include direct medical, mental health care, police and fire services, social and victim services, property costs, victim productivity losses, pain, suffering, and quality of life
	Fatal crime		12.0	
	Rape		25.0	
	Other assault		30.0	
	Robbery		0.4	
Miller, 1993	Total Criminal Victimization	1989	<u>178.4</u>	Costs includes direct medical and mental health costs, productivity losses, and non-monetary losses — pain, suffering, and lost quality of life
	Rape		10.1	
	Robbery		23.1	
	Assault		96.0	
	Arson		0.9	
	Murder		48.2	
Strauss, 1987	Spouse violence wife beating	1985	NS	Methods are being developed to quantify medical and non-medical costs, and other related costs
	child abuse			
Strauss, 1988	Intra-family assault and homicide	1982	NS	36 million people per year need medical care as a result of an assault by a family member, and they require 1.2 million office visits, 2.1 million emergency room visits, and 25 thousand hospital admissions.

Table 4. National Data Sources for Domestic Violence

<u>Data Source</u>	<u>Methodology</u>	<u>N</u>	<u>Injury/Medical Care</u>	<u>Work/Activity Loss</u>	<u>Law Enforcement</u>	<u>Criminal Justice</u>
Commonwealth Fund Survey of Women's Health	1993 Nationally representative telephone survey	3,525 = None 2,525 women 1,000 men		None	None	None
National Crime Victimization Survey	Annual nationally representative survey - 75% by telephone	110,000	Type of injury Where medical care Length of hospital stay Insurance Total medical expenses	Major activity Kind of work Lost work time Lost wages/pay - due to injury -due to police or court proceedings	None	None
National Family Violence Survey	1975, 1985 National cross sectional telephone surveys	6,002	Whether injured or not Where medical care, received How many times medical care received Whether hospitalized or not	Kind of work Effect on job performance Lost work time	Police called Police responses Arrests	Court cases Result of cases
Survey of Violence Against Women	National sample, telephone survey	8,000	Whether injured or not Type of medical care received, times received Who paid for care	Days lost from employment, childcare, household chores, social/recreational time	Reported to police?	Charges files? Result of charges

Uniform Crime Reports

Annual index of
crime in the US
compiled from
local police
reports

Number of homicides

None

Arrests

None

APPENDIX I

ABSTRACTS

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ABSTRACTS

Abbott, J., Johnson, R., **Koziol-McLain**, J., Lowenstein, S. (1995) Domestic Violence Against Women. Incidence and Prevalence in an Emergency Department Population. JAMA **273**(22): 1763-1767.

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Title of Paper: Domestic Violence Against Women. Incidence and Prevalence in an Emergency Department Population

Authors: Jean Abbott, MD; Robin Johnson, MD; Jane Koziol-McLain, RN, MS.; Steven Lowenstein, MD, MPH

Publication: JAMA 273(22): 1763-1 767, June 14, 1995.

Objectives: To determine the incidence, 1-year prevalence, and cumulative prevalence of domestic violence among female emergency department patients

Types of Violence: Physical abuse or threats

Definition: an injury (hitting, punching, slapping, or other trauma) or stress (from threats or violent behavior or from her own fears) to a woman caused by a **boyfriend** or husband

Data Sources: Survey questionnaire, chart abstraction

Methods: Written survey administered to all willing participants who presented at the ED. Participants were asked if their visit today was for injuries from a husband or boyfriend or stress related to violence. Medical charts were abstracted for demographic information, use of psychiatric or social services, and drug and alcohol use.

Sample Size and Demographics: 648 women (78% participation rate), median age = 34 years, 62% unemployed, 49% with income below \$10,000.

Period of Study: 30 randomly selected 4-hour time blocks in April and May of 1993.

Costs: NA

Prevalence: Women with current male partner:

11.7% "acute" domestic violence

23% of those abused presented for injuries

Women without current partners:

5.6% had experienced domestic violence in the past 30 days

Entire sample:

Lifetime prevalence of domestic violence was 54.2%

Incidence: see above

Mental Health Consequences: Women exposed to acute or prior domestic violence were more likely than unexposed women to have made suicide attempts (26% vs. 8%) and to report excessive alcohol use (24% vs. 13%)

Critique: Good data on prevalence from one location, though data cannot be generalized beyond an ER population. No cost data.

Title of Paper: Violence During Pregnancy and Substance Use

Author(s): Hortensia Amaro, Ph.D., Lise E. Fried, MSPH, Howard Cabral, M.P.H., & Barry Zuckerman, M.D.

Publication: AJPB May 1990, 80(5), 575-579.

Objectives: 1) To describe the prevalence and patterns of violent incidents during pregnancy. 2) To describe the association between demographic and psychosocial characteristics and violence during pregnancy. 3) To investigate the association between the experience of violence during pregnancy and the use of alcohol and illicit drugs by pregnant women and their partners. 4) To investigate the association between the experience of violence during pregnancy and newborn outcomes.

Types of Violence: Physical or sexual violence.

Data Sources: Interview, urine sample, medical record review.

Methods: Prospective study participants were interviewed both prenatally and postpartum. The prenatal interview assessed violent incidents and substance abuse data. The postpartum interview determined violent incidents from the previous interview to the time of delivery, along with substance abuse during the same period. Participants submitted urine samples at the time of both interviews for drug assay. During the prenatal period, participants were asked if partners used alcohol, marijuana, or cocaine. Sociodemographic data was also solicited by a close-end forced-choice interview which included the timing and frequency of substance abuse. At the postpartum phase, independent trained record reviewers abstracted data to record the participants' reproductive and general medical health histories. Odds ratios were calculated to compare victims and nonvictims in terms of sociodemographic characteristics and substance abuse. Multivariate models were used to assess the relationship between violence, drug use, and neonatal outcomes.

Measurement: Life Stress was measured by the Life Experience Survey (LES). Depressive symptoms were measured by the CES-D scale.

Sample Size and Demographics: Size: 1,243 women recruited from Boston prenatal clinics. Race: American Black= 55%, foreign-born Black -19%, Hispanic -18%, white = 8%. Marital Status: single = 62%. Age: 19-29 years (x=24) = 66%, < 18 years = 16%. Socioeconomic Status: 48% a low income < \$500, 24% unemployed. Education: 42% had 12 years of school.

Period of Study: 1984-1987.

Costs: Not stated.

Prevalence: 7% of participants reported physical or sexual violence during pregnancy. An additional 3% reported violent incidents in the three months prior to their pregnancy with < 1% of the participants reporting violent incidents both three months before and during their pregnancies.

Incidence: Not stated.

Mental Health Consequences: Victims of violence were at greater risk than their non-victim counterparts of having reported a history of one or more depressive episodes (56%) and to have attempted suicide (17%). 33% of victims reported unhappiness about their pregnancy. The victims also reported more depressive symptoms and greater numbers of negative life events in the past year. Victims of violence during pregnancy were at greater risk than non-victims of being heavy users of alcohol and illicit drugs and had partners who used these drugs.

Critique: The results showed only a weak association between the experience of violence and substance abuse with newborn size or gestational age. Limitations of this study are acknowledged by the authors. First, the sample is not representative by economic and ethnic status. The prevalence of violence and substance abuse may differ in the population. Second, the psychological impact of abusive relationships was not evaluated. Third, the assessment of violence was limited for assessing the causal ordering of the relationship between violence, substance abuse and depression. Finally, partners substance abuse was reported by participants and may not be valid.

Title of Paper: Posttraumatic Stress Disorder Among Battered Women: Risk and Resiliency Factors.

Author(s): Millie C. Astin, Kathy J. Lawrence, and David W. Foy

Publication: Violence and Victims, 8(1): 17-28, 1993.

Objectives: To test three hypotheses: (a) diagnosable post-traumatic stress disorder (PTSD) levels would be found among battered women; (b) level of trauma experienced would be associated with PTSD symptom level; (c) other psychosocial variables would also contribute to PTSD symptoms levels.

Types of Violence: Domestic violence.

Data Sources: Clinical survey of clients of three Los Angeles area battered women's shelters and one counseling center for battered women.

M e t h o d s : Self-administered questionnaire to assess violence, PTSD symptomatology, and psychosocial characteristics, completed in groups of 5 to 8 participants. Interviews on PTSD symptoms.

Measurement: PTSD symptomatology was measured using the Impact of Event Scale (IES) and the PTSD Symptom Checklist. Violence exposure was measured using Form N of the Conflict Tactics Scale (CTS). Social support was measured using the short form of the Support Questionnaire (SSQSR). Stressful life events were measured using the Life Experience Survey (LES). The Religiosity was measured using the Age Universal Religious Orientation Scale. A self-report questionnaire designed for this study was used to assess demographic variables and developmental stressors in the family of origin.

Sample Size and Demographics: 53 battered women. Age: 18-58 years $M = 33$, $s.d. = 8.8$. Race: European American--57%, African American--19%, Latino--17%, Asian American--4%, Native American--4%. Education: completed high school--60%, not graduated from high school--21%, completed college--19%. Employment status: employed or student--57%, unemployed or disabled--43%. Marital status: separated or divorced--63%, same civil status (married or single) as during the battering relationship--34%, remarried--2%, widowed--2%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Because of the sampling design, all women were battered. Levels of severity were not stated.

Incidence: Not stated.

Mental Health Consequences: 55% met criteria for PTSD using the PTSD Symptom

Checklist and 58% met PTSD criteria using the IES. 33% met both sets of criteria.

Critique: **PTSD** was measured using well-validated instruments and multiple methods (self-report and interview). Relationships between the PTSD measures are reported. However, the sample is small and representativeness is questionable.

Title of Paper: Violence Against Women: A National Crime Victimization Report

Author(s): Ronet **Bachman**

Publication: US Department of Justice, NCJ-145325, 14 pages, January 1994

Objectives: To provide important insights about **violences** suffered by women

Type of Violence: Rape, robbery, and assault

Data Sources: National Crime Victimization Survey

Methods: National representative sample survey; data for the five-year period, 1987-1991, were used to obtain annual rates. The numerator of a given rate was the sum of the crimes that occurred each year **from** 1987 through 1991 for each respective demographic group; the denominator was the sum of the annual population totals for the same years and demographic groups.

Measurement: Descriptive statistics

Sample Size: About 400,000 women

Period of Study: 1987-1991

Costs: Not stated

Prevalence: On average each year, women experienced 572,032 violent victimizations at the hands of an intimate, or 5.4 per 1,000 intimates; 49,983 incidents were committed against men, or 0.5 per 1,000 intimates. Thus, compared to men, women experienced over 10 times as many incidents of-violence by an intimate.

Incidence: Not stated

Mental Health Consequences: Not stated

Critique:

The National Crime Victimization Survey measures crimes of violence (rape, robbery, aggravated assault, and simple assault), crimes of theft, and household crimes. The survey does not include murder and incidents that the victim may not recognize as crimes. The survey did not directly ask respondents about attacks which were perpetrated by intimates or other family members. If, however, a respondent revealed that they had been attacked or otherwise victimized by someone known to them, such as a husband or boyfriend, the incident was recorded as such. Thus, the prevalence of domestic violence may be understated. No cost estimates were reported.

Title of Paper: Suicide Attempts by Battered Wives

Author(s): B. Bergman and B. Brismar

Publication: *Acta Psychiatrica Scandinavica*, 83: 380-384, 1991.

Objectives: To describe the scope of suicidal behavior among battered wives.

Types of Violence: Domestic violence.

Data Sources: Stockholm County Council's computer files on inpatient care, medical records, and psychiatric records for 117 battered women seen at the surgical emergency room of Huddinge Hospital, and 117 control women selected through the population register and matched on age, nationality, and geographic area in Greater Stockholm.

Methods: Suicide rates of battered women were compared to those of controls over a 16-year follow-up period. Rates for control women were compared to rates found as part of a study of 600 patients treated in the hospital because of suicide attempts. Suicide rates of controls and these 600 patients were similar.

Measurement: Medical record data were coded.

Sample Size and Demographics: 117 women in battered group. **Age:** $M = 33$, range 16-75, at the time of battering. **Nationality:** born outside Sweden --56% (compared to norm of 20% of women in the catchment area).

Period of Study: 1983-84. Authors state that register data were studied for 16 years, but this isn't logically possible (that would make follow-up 1999-2000).

Costs: Not measured.

Prevalence: Not measured.

Incidence: Not measured.

Mental Health Consequences: During the study period, 19% of the battered made at least 1 suicide attempt resulting in inpatient care, compared to 1.7% of the control women.

Critique: A limitation of the study is the unclear follow-up period. Also, because it is unclear how battering was diagnosed in the battered and control groups, it is possible that undetermined amounts of domestic violence went undetected in both the control group and the group in which the battered sample was identified. The study productively used existing data to provide convincing evidence that suicide attempts are more common among battered women than non-abused women.

Title of Paper: Can Family Violence be Prevented? A Psychological Study of Male Batterers and Battered Wives

Author(s): B. K. Bergman and B. G. Brismar

Publication: Public Health, 106: 45-52, 1992.

Objectives: To establish the importance of social background factors as violence alcoholism in the family of origin for the eruption of similar problems in the next generation.

Types of Violence: Domestic violence.

Data Sources: Clinical survey of 49 battered wives seeking hospital care and 18 battering husbands in jail.

Methods: Women seen in the surgical emergency department with injuries due to battering were interviewed 1-2 days after the injuries were sustained, while still in the hospital. The interviews were supplemented with medical record data. Because of practical constraints, the men who had injured these women were not studied; therefore, male batterers were sampled from a jail population and interviewed. The men had been sentenced for assault and battery of their wives or partners. The interviews were supplemented by legal record data.

Measurement: Not specified.

Sample Size and Demographics: 49 battered wives and 18 male batterers. **Age:** women: \bar{M} = 33, range = 19-55; men: \bar{M} = 37, range = 19 to 57. **Marital status:** women: married or cohabiting--61%; men: married or cohabiting--50%. **Country of birth:** women: Sweden--51%, abroad--49%; men: Sweden--50%, abroad--50%. **Occupation:** women: blue collar--45%, white collar, 16%, unemployed or retired--29%, other not employed (e.g. students, homemakers)--10%; men: blue collar--56%, white collar 11%, unemployed or retired--33%, other not employed--0%. **Education:** None had a university degree.

Period of Study: Women: 1983- 1984. Men: 1989- 1990.

Costs: Not measured.

Prevalence: Women: not applicable (all women had been battered). Men: not stated.

Incidence: Women: 6% were admitted for a first episode for battering (i.e. 94% had been battered before).

Mental Health Consequences: **Alcohol abuse:** women--24% had current alcohol dependence. **Drug abuse:** women--24% had lifetime cannabis abuse; 14% had lifetime amphetamine abuse; 7% had lifetime heroin/cocaine/etc. abuse.

Critique: A strength of the study is use of multiple methods of data collection (interviews and medical records) and documented severity of abuse. Limitations include apparently non-systematic measurement, small sample size, lack of sample representativeness, and lack of information on date of onset of domestic violence and substance abuse.

Title of Paper: Domestic Violence: Risk Factors and Outcomes

Author(s): Daniel C. Berrios, M.D., M.P.H. & Deborah Grady, M.D., M.P.H.

Publication: Western Journal of Medicine, 1991, 155(2), 133-135.

Objectives: To describe the risk factors for and outcomes of domestic violence.

Type of Violence: Domestic violence.

Data Sources: Survey.

Methods: Structured personal interviews on standardized forms were given to women who presented to an emergency department with injuries due to domestic violence. Results were obtained by use of the Statistical Analysis Software package (SAS).

Measurement: Not applicable.

Sample Size and Demographics: Size = 218. Median age = 29 years. Race: Asian/Pacific Islander = 14%, Black = 38%, Hispanic = 19%, White = 23%, Other = 2%, Unknown = 4%. Economic status: Employed = 27%, General Assistance (SSI) = 27%, Unlawful activities = 9%, Batterer = 7%, Family = 1%, Unknown = 29%.

Period of Study: A review of data from 1983 - 1991.

Costs: Not stated. Treatment: 28% admitted to hospital for treatment of injuries, and 13% underwent major surgical intervention.

Prevalence: Not stated.

Incidence: 86% of women victims reported at least one previous episode of abuse. 40% had required medical attention, with 13% requiring hospital admission for previous abuse. Some 10% of the victims were pregnant at the time of abuse, 30% reported that they had been abused during a previous pregnancy, and 5% claimed that they had miscarried because of abuse.

Mental Health Consequences: Projects that these abused women may suffer psychological disorders such as depression and substance abuse in the final stage of a syndrome of battering. Some 16% of these women had attempted suicide.

Critique: The study is a descriptive survey of hospital emergency room data reliant on self-reports which may limit generalizability. There may be some selection bias in this study since the sample of 218 was drawn from a pool of 492 records, but only completed questionnaires were included.

Title of Paper: Psychiatric Disorders, Spouse Abuse and Child Abuse

Author(s): R. C. Bland and H. Orn

Publication: Acta Psychiatrica Belgica, 86:444-449, 1986.

Objectives: To interview adults on their mental health.

Types of Violence: Domestic violence, child abuse.

Data Sources: Sample survey of 2,000 residents of Edmonton, Alberta, Canada.

Methods: Personal interview (?) survey.

Measurement: Diagnostic Interview Schedule (DIS).

Sample Size and Demographics: 2000 adults. Of these, 605 men and 1,015 women had been married or lived as married; domestic violence was evaluated in this group. 457 men and 908 women had children; child abuse was evaluated in this group.

Period of Study: January 1983 - January 1985.

Costs: Not measured.

Prevalence: In their lifetimes, 19.7% had hit or thrown things at their spouse. 2.3% of parents had spanked or hit a child hard enough so that he or she had bruises or had to stay in bed or see a doctor.

Incidence: Not stated.

Mental Health Consequences: Not stated.

Critique: The sample is large and representative, and a well-validated measure of psychiatric diagnosis is used. However, there is no measure of having been abused by a partner, only of having perpetrated spouse or child abuse.

Title of Paper: Domestic Violence and Pregnancy: Implications for Practice

Author(s): Diane K. Bohn, CNM

Publication: Journal of Nurse-Midwifery, 35(2), 86-98, March/April 1990.

Objectives: 1) To review the literature concerning the evidence of abuse during pregnancy. 2) To promote the role of nurse-midwives in prevention, assessment, and intervention with violent families.

Types of Violence: Abuse during pregnancy.

Definition: Battered women are defined as women who have suffered one or more episodes of battery from their male partner or ex-partner. Battery includes slapping, kicking, punching, shoving, torture, and sexual assault. Women who are physically abused also suffer psychological and emotional battery.

Data Sources: Review of literature on abuse during pregnancy since 1985

Methods: Not applicable.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not stated.

Prevalence: Battered women reporting abuse during pregnancy = 22.7% - 100%. Most studies (Tables 1 and 2) show a prevalence of approximately 50%.

Incidence: One in every fifty pregnant women may be beaten,

Mental Health Consequences: Substance abuse during pregnancy is more common among battered women, as are postpartum depression and suicide attempts. Decreased self-esteem, poor self-image; chronic anxiety, depression, self-destructive behavior, and somatic symptoms also are found.

Critique: This is a review paper targeted at practicing nurse-midwives. Past studies are nicely summarized. No new data are presented.

Title of Paper: Violence Against Women as a Health Care Issue

Author(s): Sandra K. Burge, Ph.D.

Publication: Family Medicine, 21(53), 368-373, 1989

Objectives: Discusses the health issues of women who are victims of violence, and encourages family physicians to give priority to this issue.

Types of Violence: Wife-battering and sexual assault.

Data Sources: Literature review.

Methods: Not applicable. A descriptive paper.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not stated.

Prevalence: (from published literature)

Husband-to-wife violence rate = 11.3% (for 1985). Severely assaulted = 3% of wives (included in the 1985 rate). Sexual Assault = 71 out of every 100,000 women in the U.S. Reported being a victim of rape or attempted rape. In a prevalence study of rape in the San Francisco area = 3% of the sample population had been victims of rape or attempted rape. Of this 3%, only 6% of the victims of rape reported the act as being perpetrated by strangers,

Incidence: 1.6 million severely abused women per year.

Mental Health Consequences: (from published literature)

Battered women's psychological reactions include fear, confusion, and acute sensations of powerlessness. Some victims remain withdrawn and passive and exhibit symptoms of depression and listlessness. Chronic fatigue and tension, intense startle reactions, sleeping and eating disturbances, post-traumatic stress disorder and nightmares may be noted.

MMPI tests reveal that battered women score high on anger, confusion, and fearfulness. Reactions to violence may cause a misdiagnosis as they fit the DSM-III's behavioral descriptors for schizophrenic and borderline personality disorders. Sexual assault victims tend to react to victimization with anxiety, phobias, and continual feelings of vulnerability. Scores at clinical levels are found on almost every psychological measures. Reactions include phobic reactions, depression, hostility, and/or somatic symptoms.

Critique: This paper is a review of the literature and a call to action for physicians. It contains no new data for cost estimation.

Title of Paper: A Test of Two Explanatory Models of Women's Responses to Battering

Author(s): Jacquelyn C. Campbell.

Publication: Nursing Research, 38:(1), Jan/Feb 1989, 124.

Objectives: 1) To compare responses of battered women with those of other women experiencing serious difficulties in an intimate relationship. 2) To compare the relative applicability of two theoretical models (learned grief and helplessness) as an explanation for these responses.

Types of Violence: Battering/Physical Abuse. Sexual Assault.

Data Sources: Sample survey following an initial pilot study.

Methods: Recruited participants within two groups, battered and non-battered, were interviewed for sexual assault and confirmation of the partner violence experience with appropriate measures for purposes of data generation for subsequent analyses. Data collection involved a combination of standardized measurement instruments along with an in-depth interview with both open-ended and forced-choice questions. A pilot study was conducted using the interview schedule with both cohort groups, battered and non-battered women. The initial schedule was then refined according to the pilot sample finding. Multiple regression analyses were used for comparison of the two models.

Measurement: Six instruments for measurement purposes were used along with an interview schedule: 1) Tennessee Self-Concept Scale (TSCS) which measures both components of the self-concept and overall self-esteem; 2) Beck Depression Inventory (BDI) was used to measure enduring behavioral manifestations of depression consistent with both grief and learned helplessness; 3) Denyes Self-Care Agency Instrument (DSCAI) was used to measure agency beliefs in the grief model and perceived ability to care for self (learned helplessness); 4) SCL-90 Modification Instrument measured the incidence and severity of physical symptoms of stress and grief; 5) Blame Operationalization was used to apply the attributional models to battered women; and 6) Conflict Tactics Scale (CTS) was used to determine the frequency and severity of conflict in the relationship. The remaining variables (e.g., control of the woman in the relationship) were measured by standard interview questions.

Sample Size and Demographics: A final sample size of 193 was selected by power analysis in two distinct metropolitan areas and recruitment in two shelters for battered women. The cohort groups for battered and non-battered women in this sample were 97 and 96, respectively. 23.7% of the battered women's group were shelter residents. Race: 36% of the battered women belonged to a minority ethnic group. Age: 60% of the total sample were < 30 years of age. SES: 38% of the total sample were below the poverty level. Marital Status: 35% of the total sample were legally married (but they all were

currently in a problematic, intimate heterosexual relationship which had lasted ranging from 1 - 35 years--the average being 8.3 years). Employment Status: 71% of women in the total sample were either employed or attending school full time.

Period of Study: Not stated.

Costs: Not stated.

Prevalence: The frequency of relationship sexual abuse in the sample was 22.3%.

Incidence: 45.6% of the sample reported physical violence toward women; 3.1% reported mutual violence and sexual abuse.

Mental Health Consequences: Battering is the single most important precipitant of female suicide. The Multiple Regression results for the Modified Grief Model and Modified Learned Helplessness Models were examined using depression as the sole outcome variable showed that both models were approximately equal in their explanatory power.

Critique: The author acknowledges a major weakness in this study was the failure to operationalize adequately the cognitive (as opposed to the affective) component of learned helplessness, so that the learned helplessness model was not complete in its evaluation. Both models with their significant explanatory power for battered women have implications for nursing's theoretical and practical arenas.

The author provides an excellent summary of major studies in depression in battered women.

Title of Paper: Correlates of Battering During Pregnancy.

Author(s): Jacquelyn C. Campbell, Marilyn L. Poland, John B. Waller, and Joel Ager.

Publication: Research in Nursing & Health, 15, 2 19-226,1992.

Objectives: To identify the factors associated with violence during pregnancy, including adequacy of prenatal care.

Types of Violence: Domestic violence (battering during pregnancy).

Data Sources: Survey interviews and medical chart reviews.

Methods: A retrospective study. A convenience sample of postpartum women at five hospitals were interviewed 2-5 days postpartum. Medical charts were reviewed to validate reported prenatal care visits. Drug and alcohol use were also assessed.

Measurement: The prenatal Interview consisted of open-ended and fixed-choice questions. These questions were designed to elicit: a) descriptions of the experience of being pregnant and receiving prenatal care; b) the content of prenatal care; c) health behaviors, such as smoking, drinking, and drug use before and during pregnancy; d) demographic information; e) an assessment of tangible, informational, and emotional support from family, friends, and others; f) data pertaining to depression, anxiety, hopefulness about future life, and physical violence.

The amount of prenatal care was assessed by use of the Kessner Index. Battering was assessed with questions from the March of Dimes Protocol of Care (1986).

Sample Size and Demographics: Size = 488 primarily Medicaid postpartum women. Age: $x = 23.3$ years. Race: African-American = 333. Education: $x = 11.3$. Medicaid eligible=409. Parity: $x = 1.3$ children. Length of gestation: $x = 38.4$ weeks. Birthweight: $x = 305$ gms.

Period of Study: May 1988- February 1989.

Costs: Not stated.

Prevalence: Total prevalence of partner assaults = 11.2% of sample. Pregnancy assault by partners = 7%. Pregnancy assault by others = 1.2%.

Incidence: Assault by partners during pregnancy = 35 women. Women victimized by violence = 62 women. Assault by others during pregnancy = 6 women.

Mental Health Consequences: Substance abuse (22.8%~. Depression (83%). Anxiety (89%).

Critique: The findings of this study confirm other recent studies that show that the incidence of violence by partners increases significantly during a woman's pregnancy. The identified battered women showed increased rates of mental health disorders. The use of illicit drugs and alcohol is associated with violence. While the study found correlation, it did not assess causality.

Title of Paper: Women Who Use Domestic Violence Shelters: Changes in Depression Over Time

Author(s): Rebecca Campbell, Cris M. Sullivan, and William S. Davidson II

Publication: Psychology of Women Quarterly, 19: 237-255, 1995.

Objectives: To examine changes over time in the levels of depression among women who had recently used a domestic violence shelter.

Types of Violence: Domestic violence.

Data Sources: Longitudinal interview study of residents in a Midwestern domestic violence shelter.

Methods: Residents who agreed to participate were interviewed upon shelter exit, 10 weeks later, and 6, 12, 18, and 24 months later. Personal interviews were used when participants were in the general area; those who had moved were interviewed by telephone.

Measurement: Degree of domestic violence was measured with a modified version of the Conflict-Tactics Scale (CTS) Violence subscale. Depression was measured with the Center for Epidemiologic al Studies Depression Scale (CES-D).

Sample Size and Demographics: 139 women who had stayed at least one night in the shelter and were alive at the time of follow-up. **Race:** European American--45%, African American--43%, Latina (mostly Mexican American)--8%, Asian American--1%, others--3%. **Education:** less than high school--36%, high school graduate--30%, some college--24%, college graduate--5%, trade school--4%, professional degree--1%. **Marital status (at onset of study):** married--34%, separated--6%,; divorced--1%, cohabiting--45%, unmarried couple not living together--5%, ex-girl/boyfriend (??)--7%, dating, but not in a relationship-- 1%, others-- 1%. **Parental status (at onset of study):** 79% had at least 1 child living with them. **Employment status (at onset of study):** employed--17%, student--11%. **Income (at onset of study):** below poverty level--60%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable (only battered women were studied).

Mental Health Consequences: At shelter exit, 83% were depressed (CES-D ≥ 16). At 10-week follow-up, 68% of the 45% who had been recently abused were depressed, as were 50% of those who had not been recently abused. At 6-month follow-up, 71% of the 43% who had been recently abused were depressed, as were 49% of the 57% who had not been recently

abused. When previous depression and abuse, and current locus of control and social support were controlled, current abuse was marginally significantly related to depression ($p = .06$).

Critique: The longitudinal design and use of a well-validated depressive symptom measure are strengths of the study. That depression persists mostly among women whose experience of domestic violence persists, and that current abuse was related to current depression when previous depression and abuse were controlled, suggest a causal relationship between abuse and depression.

Title of Paper: Victims of Violence and Psychiatric Illness

Author(s): Elaine (Hilberman) Carmen, M.D., Patricia Perri Rieker, Ph.D., and Trudy Mills, Ph.D.

Publication: American Journal of Psychiatry 141:378-383, 1984.

Objectives: To investigate the relationship between physical and sexual abuse and psychiatric illness in a psychiatric inpatient population.

Types of Violence: Physical and sexual abuse.

Data Sources: Psychiatric inpatient records of 188 adults and adolescents discharged from an adult inpatient unit.

Methods: Psychiatric record review.

Measurement: The research team developed a standardized coding instrument to analyze demographic information; social, medical, and psychiatric histories; and behavior before and during hospitalization, along with details on the type and extent of violence. Violence was defined as any form of serious physical or sexual abuse, including child abuse, incest, marital violence, and assault or rape occurring outside the family.

Sample Size and Demographics: 188 patients, 66 men and 122 women. Age: 12-88 years; adolescents--15%, elderly--4%. Race: European American--80%, African American--20%. Marital Status: married--25%, never married--47%, others not stated. Education: less than high school--26%, college graduate-- 18%, others not stated. Occupation: professionals--21%, in clerical, sales, craft, or unskilled--33%, others not stated. Income: < \$10,000 = 52%, others not stated. Employment: disabled or unemployed -- 35%, others not stated.

Period of Study: January 1980 - June 1981.

Costs: Not measured.

Prevalence: 43% of the sample (53% of women, 23% of men) had histories of physical and/or sexual abuse. 90% of these had been abused by family members. Of the abused patients, 51% had been abused by husbands or former husbands. This translates to 37 women or 30% of all women patients in the study.

Incidence: Not measured.

Mental Health Consequences: Abused patients were more likely than non-abused patients to have a history of suicide attempts and to have alcoholic fathers, and to have organic symptoms or confusion on admission. There were no differences between abused and non-abused patients with respect to history of alcohol or street drug abuse, or in suicidality, aggression, depression, substance abuse, conduct disorder, anxiety, psychosomatic disorders,

or psychosis on admission. Abused patients tended to remain in the hospital longer than non-abused patients.

Critique: Limitations of the paper include reliance on psychiatric records of abuse (since there is evidence that it may be under-detected) and lack of standardized measures of either abuse or mental disorders. For the purpose of the present study, the aggregation of all forms of physical or sexual abuse, regardless of the identity of the offender, is a limitation since mental disorders associated with domestic violence cannot be identified. Lack of information on dates of onset of abuse and mental disorder precludes inferences about causal direction. However, the study provides some of the first evidence of the high prevalence of various forms of abuse in a clinical population.

Title of Paper: Depressive Symptomatology, Self-Esteem, and Self-Blame in Battered Women

Author(s): Michele Cascardi and K. Daniel O'Leary.

Publication: Journal of Family Violence, 7:249-259, 1992.

Objectives: To estimate the prevalence and relationships among depressive symptoms, poor self-esteem, and self-blame among battered women.

Types of Violence: Domestic violence.

Data Sources: Self-report data from 33 women seeking therapeutic assistance from the Nassau County Coalition Against Domestic Violence.

Methods: Clients were asked to complete self-report instruments following intake interviews but before receiving services from the agency.

Measurement: Degree of domestic violence was measured using a modified Conflict Tactic Scale (MCTS). Open-ended items were used to assess types of injuries sustained. Depressive symptoms were measured using the Beck Depression Inventory (BDI). Blame was measured using a "blame scale" constructed for the study. Self-esteem was measured using the Rosenberg Self-Esteem scale (RSE).

Sample Size and Demographics: 37 women were. **Age:** $M = 31$, range 19-50. **Race:** European American--67%, others not stated. **Religion:** Catholic--61%, others not stated. **Marital Status:** Married--67%, single--27%, divorced--6%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: 70% of the women scored greater than 14 on the BDI; 52% scored greater than 20.

Critique: Limitations include small sample size and lack of generalizeability. Strengths include use of a well-validated depression measure.

Title of Paper: Evaluating the Effectiveness of a Court Sponsored Abuser Treatment Program

Author(s): Huey-tsyh Chen, Carl Bersani, Steven Myers, and Robert Denton

Publication: *Journal of Family Violence* 4(4): 309-322, 1989,

Objectives: To evaluate a court mandated abuser treatment program consisting of two phases - an informational phase in which the abuser attended four 2 hour sessions and an interactive phase in which the abuser participated in a group for four 2 hour sessions. The outcome of interest was the recidivism rate .

Types of Violence: Abuse committed by a male batterer who was sentenced by a municipal court judge.

Definition: Spouse battering

Data Sources: Municipal court files and program participation.

Methods: Non-equivalent control group design. The model consisted of two equations: an assignment equation modeling how judges determine who to assign to the treatment option, and an outcome equation estimating the treatment effect.

Measurement: NA

Sample Size and Demographics: 120 convicted male batterers referred to treatment between 10/83 and 6/85 and 101 convicted male batterers in the control group.

Period of Study: 1983 to 1985+

Costs: NA

Prevalence: NA

Incidence: NA

Mental Health Consequences: NA

Critique: The time period during which the recidivism rate is measured is not indicated. The authors conclude that only defendants who attended 75% or more of the treatments experienced decreased recidivism; others showed no impact. While this study has important policy implications, it is not useful for a cost study.

Title of Paper: Costs and Consequences of Violent Behavior in the United States (pp. 67-166).

Author(s): Cohen, Mark A., Miller, Ted B., and **Rossman**, Sheila B.

Editors: Reiss, Jr., Albert and Roth, **Jeffrey A.**

Publication: Understanding and Preventing Violence, Vol. 4, Consequences and Control, National Academy Press, Washington, D.C., 1994.

Objectives:

- 1) To present a comprehensive theoretical framework to evaluate the costs and consequences of violent behavior.
- 2) To review and update existing estimates of the cost of victimization.

Types of Violence: Homicide, robbery, aggravated assault, and rape.

Data Sources: Multiple sources including the Uniform Crime Reports, National Crime Surveys, Jury Verdict Research Reports, National Council on Compensation Insurance (**NCCI**) Detailed Claims Information (**DCI**), and various research studies.

Methods: Two types of victimization costs are estimated: monetary costs are estimated directly by applying average costs or charges to estimated incidence **from** survey data and literature reviews; nonmonetary costs such as productivity losses are based on lost workdays, lost housework days and lost school days and appropriate average values. Pain and suffering values are based on willingness-to-pay and compensation estimates. Costs of society's response to violent behavior are estimated using a disaggregated approach: estimating the cost of each stage of the criminal justice process and applying these estimates to individual crime types.

Measurement: Incidence-based human capital and willingness to pay approaches.

Sample Size: Not applicable

Period of Study: 1987

Costs: The cost of victimization per person (summarized below) includes the following: direct medical, mental and property costs; emergency response; victim productivity losses due to medical, mental health, and the legal process; program administration costs; and pain, suffering, and quality of life. Roughly 85% can be attributed to non-monetary losses (pain, suffering, and quality of life). The remaining 15% include direct monetary losses to victims, lost productivity, emergency response, and program administration.

The cost per victim of society's response to violent behavior (summarized below), includes the following: criminal justice-related costs and incarcerated offender productivity losses.

Aggregate Cost* of Violent Behavior

	Rape	Robbery	Assault
Number of victims	147,000	1,068,500	4,930,000
Cost of victimization per person	\$54,100	\$19,200	\$16,500
Aggregate costs (billions)	\$8.0	\$20.5	\$81.3
Cost of society's response to victimization per person	\$10,900	\$5,600	\$5,600
Aggregate costs (billions)	\$1.6	\$6.0	\$9.1

*Discounted at 2.5 percent

Prevalence: Not stated.

Incidence: See number of victims above. Costs include the present and **future** costs associated with victim injuries that occurred in 1987.

Mental Health Consequences: The frequency of post-traumatic stress disorder is estimated to be 19.0% for aggravated assault and 13.8% for robbery. The rate of traumatic neurosis is estimated at 40% vulnerable in rape victims and the rate of severe psychological injuries is 10% for rape victims and 2% for robbery victims.

Critique: This a lengthy and comprehensive paper covering the costs of violent behavior of all types. The authors review the literature on cost estimation and bring together many disparate sources of information concerning the magnitude of the costs and consequences of victimization. They carefully document all of the sources of data used in their estimates. Domestic violence, however, is not separated and not estimated .

Title of Paper: The Commonwealth Fund Survey of Women's Health

Author(s): The Commonwealth Fund

Publication: News Release and Key Tables, July 14, 1993, 43 pages

Objectives: To interview women and men on their physical and mental health, use of services, barriers to care, and health habits.

Types of Violence: Domestic violence, rape and other physical crimes.

Data Sources: Sample survey of 2,525 American women and 1,000 men, ages 18 and over.

Methods: Telephone survey conducted by Louis Harris and Associates.

Measurement: Oversample of 405 Hispanic and 439 African American women; excludes the following: Alaska and Hawaii residents, military personnel, prisoners, hospital and nursing home patients, residents of religious and educational students, homeless and phoneless, women less than 18 years of age, and women who cannot speak English or Spanish.

Sample Size and Demographics: 2,525 women and 1,000 men. **Age:** women: 8-44--55%, 45-64--26%, 65 and over-18%; men: 8-44--59%, 45-64--27%, 65 and over-14%. **Race:** women: white--84%, black or African American-13%, Hispanic or Latino--8%, Asian or Pacific Islander-1%; men: white--81%, black or African American-11%, Hispanic or Latino--8%, Asian or Pacific Islander. **Marital Status:** women: single--18%, married--55%, widowed--14%, separated--4%, divorced-9%; men: single--26%, married--64%, widowed--3%, separated-2%, divorced-6%. **Household status:** women: lives alone-22%, lives with spouse or as couple--58%, lives with other family member--20%, lives with someone else--3%; men: lives alone--14%, lives with spouse or as a couple--66%, lives with other family member--16%, lives with someone else-7%.

Period of Study: February-March, 1993

Costs: Not measured.

Prevalence: Within the last year, 7% of women (3.9 million) who are married or living with someone as a couple were physically abused, and 37% (20.7 million) were verbally or emotionally abused by their spouse or partner. Within the last five years, 2% of women (1.9 million) were raped.

Incidence: Not stated.

Critique: This is relatively small sample **survey** that was designed to document and draw public attention to the extent of women's health problems. A limited number of questions were asked about crime, battering, rape, and abuse.

Title of Paper: Violence Against Women: Relevance for Medical Practitioners
(Council Report)

Author(s): The Council on Scientific Affairs, American Medical Association
(prepared by Angela Browne)

Publication: JAMA, June 17, 1992, 267(23, 3 184-3 189.

Objectives: This report reviews the research on violence against women and suggests ways that the physician community might address the needs of victims.

Types of Violence: Rape, partner violence, cohabitating and dating violence, and childhood sexual molestation.

Definition: Rape -- The nonconsensual sexual penetration of an adolescent or adult obtained by physical force, inflicting bodily harm, or when the victim is not capable of giving consent by virtue of mental illness, mental retardation or intoxication.

Data Sources: Review of published literature.

Methods: A review of past studies with a focus upon violence against women.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Review covers the literature from 1972-1992.

Costs: Not stated.

Prevalence: 20% of adult women, 15% of college women, and 12% of adolescents have experienced sexual abuse and sexual assault in their lifetime (1988 statistics) and the rate is higher among African-Americans. Studies on prevalence suggest that about 1/5 to 1/3 of all women will be physically assaulted by a partner in their lifetime. Marital rape is reported by 33-46% of women victims who are physically assaulted by their spouses.

Physical violence--According to a 1985 survey, nearly 1 in 8 husbands committed at least one act of physical aggression against their female partner during the year of the survey.

Incidence: Rape--92,488 reported rapes in 1988 (but this is vastly underreported”).

Physical Violence--In an average 12-month period in the United States, approximately 2 million women are severely assaulted by their male partners. Experts suggest that the

“true” incidence of partner assault is probably double this estimate-closer to 4 million severely assaulted women per year.

Approximately 37% of obstetric patients across race, educational and class lines are physically abused while pregnant.

Mental Health Consequences: Rape/Sexual Assault--The psychological impact of marital rape exhibited by women victims is severe depression and suicidality.

Childhood Sexual Molestation/Abuse--Repercussions of child sexual molestation include impacts on emotions, self-perception, and social functioning. Adult survivors are more susceptible to depression also requiring hospitalization compared with non-victim or other victims of violence. There is evidence of a high incidence of self-destructive behavior, both suicidal ideation and self-injury. Adult survivors also manifest symptoms of anxiety such as chronic and severe sleep disorders, anxiety attacks, chronic fearfulness, and hypervigilance along with disturbance in adult sexual pleasure and comfort. Some of these women also experience a sense of alienation resulting in difficulty trusting others. Somatic disorders include abdominal pain, headaches, eating disorders (anorexia or bulimia survivors are at a higher risk for substance abuse than non-victims).

Critique: This survey by a respected expert in the field covers all types of violence against women, including domestic violence. While the review is comprehensive, it contains neither new data nor cost estimates. It is targeted to medical providers.

Title of Paper: Domestic Violence

Author(s): Lianne V. Davis

Publication: (In) Encyclopedia of Social Work. 19th edition: Vol 1:780-789.
NASW Press, Washington, D.C., 1995.

Objectives: To highlight abuse to partners in intimate relationships with a focus on women as victims.

Type of Violence: Domestic violence.

Data Sources: Drawn from secondary sources that cite survey statistics, mostly published in sociological, social work, family journals. National Family Violence Survey, 1975, 1985, 1990. National Crime Survey years used: 1979-1987.

Methods: Not applicable.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of study: Not applicable

Costs: None stated.

Prevalence: Reporting on data from the 1975 and 1985 National Surveys of Family Violence and the National Crime Survey:

- 20-25% of all women have been abused at least once by an intimate male partner.
- 22-35% of women treated in hospital emergency rooms are victims of domestic abuse.
- 95% of domestic assault victims are women; 5% are men.
- There is a high prevalence of domestic violence among cohabiting youth. However, controlling for age, the rate of violence among dating couples falls below those who are married or cohabiting.
- The prevalence of domestic violence is double among nonmarried couples compared with the counterpart of married couples.
- 1.6 million women and 2.4 million men were severely abused by their partners on an annual basis.
- Homicide: Wives have sevenfold likelihood of killing their partners in self-defense.
- 25% of partners were alcohol related in abuse.
- Rates of wife abuse among African Americans were found to be twice as high as other minorities, and four times as high as white Americans. However, when controlled for socio-economic factors, African Americans had lower rates of wife abuse than white Americans. Other SES groups reflect a lower incidence of wife abuse among African

Americans than whites. There were twice as many severely abused **Latina** as **non-Latina** women.

Incidence: Not stated.

Mental Health Consequences: The article superficially covers this area pointing to psychological and emotional abuse and claims paucity of research for mental health consequences. Consequences manifest as severe depression, anxiety, suicidal tendencies among abused women, requiring long-term counseling and psychiatric evaluations.

Critique: This description article is a very broad overview of domestic violence aimed specifically for social workers. The scope of the problem is discussed drawing heavily on extant secondary sources to show prevalence of domestic violence. The author then describes three types of abuse: sexual abuse, psychological abuse, and economic abuse. It highlights six risk factors associated with increased risk of abuse: relationship status, socioeconomic factors, age, childhood experience with violence, alcohol abuse, and race.

The author discusses battering **from** six different theoretical perspectives, including Psychoanalytic Theory, Family Systems Theory, Learning Theory, Exchange/Social Control Theory, Feminist Theory, and a Feminist 'Social Work Theoretical Perspective. Roles for social workers is the focus of the concluding sections which suggests a need for advocacy for policies that empower all women.

Title of Paper: Battered Women's Cognitive Schemata

Author(s): Mary Ann Dutton, Kimberly J. Burghardt, Sean G. Perrin, Kelly R. Chrestman, and Pauline M. Halle

Publication: Journal of Traumatic Stress, 7:237-255, 1994.

Objectives: To examine battered women's cognitive schema in relation to post-traumatic reactions to violence, cognitions about violence, and sexual victimization history.

Type of Violence: Domestic violence, childhood sexual abuse history, sexual abuse by partner.

Data Sources: Intake data from 72 battered women seeking care at a specialized family violence outpatient clinic.

Methods: When women requested services at the clinic, they were administered preliminary questionnaires, clinical interview, and an assessment battery. Data from these sources were analyzed for women for whom the measures of interest were available.

Measurement: Demographic data, family history, and abuse history were measured using a structured clinical interview. Post-traumatic stress disorder was measured using (a) The Global Symptom Index (GSI) of the SCL-90-R; (b) the CR-PTSD derived from the SCL-90-R; (c) the MMPI-derived PTSD subscale (MMPI-PTSD); (d) the Impact of Event scale (IES).

Sample Size and Demographics: 72 women. **Age:** $M = 32.7$, $s.d. = 9.2$, range = 18-55. **Race:** European American--82.1%, African American--1.9%, Latina--6.0%. **Marital status:** married--50.7%, divorced--11.9%, divorce action pending--14.9%, never married--22.4%. **Family income:** <\$20,000/year--70%. **Education:** less than high school--1.9%, high school--58.2%, some college--28.4%, graduate school--.5%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: Not stated. (Associations of cognitive schemata with post-traumatic stress are reported, but not overall levels of post-traumatic stress).

Critique: The sample is small and not representative of women at this clinic, clinic users in general, or all battered women. Prevalence of post-traumatic stress disorder is not stated. However, well-validated measures are used and relationships among them are

evaluated.

Title of Paper: Physicians and Domestic Violence: Challenges for Prevention

Author(s): Anne Flitcraft

Publication: Health Affairs, Winter 1993, pp. 154-161.

Objectives: To promote a comprehensive medical response to domestic violence as advanced by the Surgeon-General in 1985, which incorporates primary, secondary, and tertiary prevention efforts.

Types of Violence: Domestic violence.

Data Sources: Draws largely upon reports generated or related to the 1985 Surgeon General's Workshop on Violence and Public Health.

Definition: Domestic violence is defined as the threat of infliction of physical harm among past or present social partners, irrespective of the legal or domiciliary status of the relationship in which domestic violence occurs. Physical and sexual assault may be accompanied by verbal intimidation and abuse; destruction of property; threats to significant others; stalking; and control over access to money, personal items, transportation, the telephone, and friends, family, and children.

Methods: Not applicable. A commentary paper.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

costs: Cites Blue Cross/Blue Shield of Pennsylvania estimates that at least \$32 million per year is spent in Pennsylvania to treat domestic violence injuries.

Prevalence: More than 1.5 million women seek medical treatment for abuse-related injuries. Domestic violence accounts for at least 20% of the female patients who use emergency services for injury.

Incidence: Not cited/stated.

Mental Health Consequences: Mentions attempted suicide; "depression" and substance abuse; and post-traumatic stress disorder, characterized by flashbacks, nightmares, hypervigilance, loss of boundaries, numbing, and chronic fear and anxiety.

Critique: This is a commentary, and not useful for cost estimation.

Title of Paper: Violence and Pregnancy: Are Pregnant Women at Greater Risk of Abuse

Author(s): Richard J. Gelles

Publication: Physical Violence in American Families (Chapter 16) Eds: Murray A. Straus and Richard J. Gelles. Transaction Publishers. New Brunswick (U.S.A.), 1990, p. 279-285

Objectives: To examine the hypothesis that pregnant women are at increased risk of violence and battering by their partners.

Types of Violence: Physical violence and abuse during pregnancy, defined as acts of violence that have a high probability of causing injury to the person.

Data Sources: 1985 Second National Family Violence Survey (Gelles and Straus).

Methods: All consenting women participants were interviewed and asked if they were pregnant.

Measurements: Conflict Tactics Scale (CTS).

Sample Size and Demographics: 46,002 respondents, nationally representative of American households.

Period of Study: 1985

Costs: Not applicable.

Prevalence: Pregnant women's risk of minor violence was 28.3% greater than non-pregnant women. For risk of abusive violence it was 60.6% greater than non-pregnant women. Overall risk of any form of violence to pregnant women was 35.6% greater than that of non-pregnant women. The rate of violence toward women < 30 years is double the rate among women over 31 years. 154 per 1,000 women during first four months of pregnancy and 170 per 1,000 women during fifth to ninth month.

Incidence: 265 per 1,000 pregnant women under 25 years

Mental Health Consequences: Not applicable. However, they found that previously reported associations between pregnancy and violence is spurious and results from the impact of age.

Critique: This study goes beyond estimating prevalence to look at causality. The author concludes that the data does not confirm the hypothesis that pregnant women are at higher risk of violence. The author specifically states that the previously reported

association between pregnancy and husband-to-wife violence is spurious and artifact of the effect of another **variable—age**. Young women have high rates of pregnancy, and, they also experience violence at a relatively high rate.

Title of Paper: Violence, Battering, and Psychological Distress Among Women

Author(s): Richard J. Gelles and John W. Harrop

Publication: Journal of Interpersonal Violence, 4(4):400–420, 1989.

Objectives: To interview adults about **their** experiences of family violence and psychosocial characteristics.

Types of Violence: Domestic violence.

Data Sources: **Survey** data from women participants in the Second National Family Violence Survey, a sample survey of 6002 U.S. adults.

Methods: Telephone survey. The sample was drawn using random digit dialing and was made up of four parts: a nationally representative sample of 4,032 households; a “state” oversample of 958 households; an oversample of 502 African American households; and an oversample of 510 **Latino** households. One randomly-chosen individual was interviewed in each household. To be eligible for interviewing, the household had to contain a currently married/cohabiting adult, an adult who had been married or cohabited within 2 years, or a single parent of a child under 18.

Measurement: Domestic violence was measured using the Conflict Tactics Scale (CTS). Psychological distress was measured using the Psychiatric Evaluation Research Interview (**PERI**) and the Perceived Stress Scale. A marital conflict index consisted of five questions about between-spouse agreement about managing money; cooking, cleaning or repairing the house; social activities and entertaining; affection and sex relations and issues about children. Health was measured by one item on health perceptions.

Sample Size and Demographics: Data were analyzed for the 3,002 women (of 3,522) who were currently married or cohabiting, or had been married or cohabited within 1 year. Demographic characteristics were not stated.

Period of Study: 1985

Costs: Not measured.

Prevalence: 11.3% of female respondents experienced minor violence in the previous year. 5% of female respondents experienced severe violence.

Incidence: Not stated.

Mental Health Consequences: Comparisons among women with no, minor, or severe violence in the past year showed that each of 9 of the 10 distress symptoms increased in prevalence in the past year as severity of violence increased. These include depressive symptoms (“feelings of sadness or depression,” “felt very bad or worthless”), anxiety (“felt

nervous or stressed,” “could not cope with all of the things you had to do”), and suicidality (“thought about taking your own life”).

Critique: This is a large, representative survey with oversamples of several underrepresented ethnic groups. The measures of violence and psychological distress are well validated. Limitations for assessing mental health consequences are that the PERI does not predict specific mental disorders well, and dates of onset of domestic violence and symptoms were not collected.

Title of Paper: The Medical and Psychological Costs of Family Violence

Author(s): Richard J. Gelles & Murray A. Straus

Publication: In Murray A. Straus, Richard J. Gelles, & Christine Smith (Eds.), *Physical Violence in American Families*, pp. 425-430. New Brunswick (USA) and London (UK): Transaction Publishers, 1990.

Objectives: To begin the process of estimating the true cost of family violence by highlighting the adverse effects on the mental and physical health of women who experience severe violence..

Types of Violence: Spouse violence and child abuse

Data Sources: 1985 National Survey of Family Violence conducted by Straus and Gelles..

Methods: Analysis of survey data on bed days of women who experienced violence, women's selfreported health status, and psychological distress.

Measurement: Bed days during last month, health status and psychological distress of women with violence in the last year.

Sample Size: 5,349 couples and 3,334 children

Period of Study: 1985

Costs: The \$1.7 billion estimate of the cost of intrafamily homicides in 1984 is regarded as a starting point. True accounting must include the cost of the long period on nonlethal family violence that typically precedes the lethal violence. Prevalence: 1.8 million seriously assaulted wives per year, and 6.9 million child abuse cases per year.

Prevalence: Not stated

Incidence: Intrafamily homicides = 5,800 in 1980 and 4,400 in 1984; 1.8 million seriously assaulted wives, or 34 victims per 1,000 couples; 6.9 million child abuse cases or 110 incidents per 1,000 children.

Mental Health Consequences: (1) Wives = high rates of psychological distress including headaches (double the incidence than non-battered women); four times the rate of feeling depressed; and five-and-a-half times more suicide attempts. 2) Children = two-to-threefold higher rates of socialization problems, temper tantrums, lowered school achievement, behavior problems, assertive behavior, and substance abuse. Need for psychiatric and other psychological services for both women and child victims suggest that mental health and non-medical costs may be much greater than the cost of treating injuries.

Critique: This paper is a chapter in a book, and needs to be viewed in context with the other chapters. It is an attempt to challenge the earlier assumptions that costs of intrafamily and violence have traditionally been based on. It advocates the need to incorporate associated costs generated by mental health, social services, and institutionalization as well as medical costs for physical injuries. No new cost estimates are presented.

Title of Paper: Prevalence of Domestic Violence in Community Practice and Kate of Physician Inquiry.

Author(s): L. Kevin Hamberger, Ph.D.; Daniel G. Saunders, Ph.D.; Margaret Hovey, BS.

Publication: *Family Medicine* 24: 283-287, 1992.

Objectives: To assess the annual and **lifetime** rate of abuse among the adult female patients at a family practice clinic in a medium-sized midwestern city and to determine whether or not the abused women had ever been asked about abuse by their physicians.

Types of Violence: Physical and verbal aggression during past 12 months or at any time during intimate relationship

Definition: Any woman who reported having at least been pushed or shoved on the CTS

Data Sources: Survey questionnaire, Conflicts Tactics Scale

Methods: All females attending the clinic during an 8 week period (6/1/91 - 7/31/91) who were at least 18, with a history of a committed relationship of at least 6 months duration, and spoke English were approached. Participants completed a survey questionnaire including demographics, relationship history, history of domestic violence, and whether the physician had inquired about abuse at the most recent visit. Descriptive statistics are presented for the abused and nonabused groups.

Sample Size and Demographics: 394 participants (82.7% response rate). Victims were younger than nonvictims, more likely to be separated or divorced, and involved in relationships of shorter duration.

Period of Study: 6/1/91 - 7/31/91

Costs: NA

Prevalence: During the last year: 22.7 % were abused and 13.3% were injured. Among the group identified as at-risk (in a relationship, separated, or divorced) the rates are 25.1% and 14.8%. Lifetime: 38.8% abused and 24.7% injured.

Incidence: NA

Mental Health Consequences: NA

Critique: The purpose of this study was to determine whether physicians were aware of their abused patients, and the conclusion was that only 6 of 394 participants had been asked by their physicians. The study provides good data on lifetime prevalence.

Title of Paper: Histories of Violence In An Outpatient Population: An Exploratory Study

Author(s): Judith Lewis Herman, M.D.

Publication: American Journal of Orthopsychiatry, Vol. 56(1), January 1986.

Objectives: To explore the connection between experiences of violence and psychiatric patient status.

Types of Violence: Physical and sexual violence.

Data Sources:

Methods: Diagnostic summaries were reviewed on all new outpatients at an urban teaching hospital, and demographic and diagnostic data were recorded. The patient's role as victim or offender, or both, were also recorded along with the type of violence. Clinical evaluation data from patients were also recorded. Data analysis was conducted by means of cross-tabulation and **chi-square** computation.

Measurement: Axes I and II of DSM-III.

Sample Size and Demographics: 190 (consecutive) patients; 105 patients were female and 85 male. Majority of patients were single people in their twenties and thirties. Majority of patients were white, working class people with a minority drawn from a more privileged university community.

Period of Study: July 1982 - June 1984.

Costs: Not stated.

Prevalence: Not stated.

Incidence: 22% reported one experience of physical or sexual abuse; 86% of victims were abused by family members; 61% of the offenders abused relatives; of married patients, 23% of females had been beaten by their husbands and 20% of men had assaulted their wives.

Mental Health Consequences: Females with a history of victimization had a fourfold likelihood of a diagnosis of borderline personality, and twice as likely to have a substance abuse diagnosis than non-victimized females.

Critique: The study's results for victims, offenders, or both, having experienced serious violence, are considered minimum estimates due to a lack of

systematic interviewing protocol or by specifically trained interviewers for obtaining data or histories of violence.

Title of Paper: Sixty Battered Women.

Author(s): Elaine Hilberman and Kit Munson.

Publication: Victimology: An International Journal, 2(3-4): 460-470, 1977-78.

Objectives: 1) To examine the psychological impact of marital violence on women referred for psychiatric evaluations at a rural health clinic by the medical staff;
2) To address case identification and treatment issues.

Types of Violence: Domestic violence; child abuse; sexual abuse; mental violence.

Data Sources: Study of 60 battered women.

Methods: Women attending a rural health clinic that were referred for psychiatric evaluation were recruited for the study. Information about these women was obtained by direct dialogue with the researchers. Material concerning their children was gathered by mothers' self-reports, pediatric clinic charts, and/or direct observation and dialogue with the women. Information concerning husbands was almost always indirect, by their wives and clinic staff who lived in the same communities.

Measurement: A descriptive study.

Sample Size and Demographics: 60 battered women. Race: 40 Black women, 20 white women. Age: 19-82 years. Marital status: 46 women were living with husbands, 4 were separated or divorced. Husband employed for 20 women; women/wife employed = 12 women; both employed = 9. Public assistance = 19 families. Majority of sample had poverty level incomes.

Period of Study: Twelve month study.

Costs: Not stated.

Prevalence: 50% of women attending clinic were victims of domestic violence.

Incidence: Not stated.

Mental Health Consequences: More than 50% of the women in the sample had past psychiatric histories. Some 9 women had classic depressive illness, one was manic-depressive, 2 were schizophrenic, 4 were alcoholics, and 4 had severe character disorders, 13 women had been hospitalized for violent and psychotic behavior. The great majority of women manifested somatic symptoms: anxiety, insomnia, suicidal behavior (usually by drug overdose), agitation, and self-mutilation and nightmares. Children have a multiplicity of somatic, emotional, behavioral and sleep problems with aggressive behavior in male offspring.

Critique: This article focuses on the psychological impact of marital violence on 60 women referred for psychiatric evaluations at a rural health clinic by the medical staff. It also addresses case identification and treatment issues. A summary of historical, cultural, and family information is also presented.

Title of Paper: **Beating** Back the Revolution: Domestic Violence's Economic Toll on Women

Author(s): Patricia Horn

Publication: Dollars & Sense, Vol. 182, December 1992, pp. 12-23

Objectives: To document the economic consequences of domestic violence on battered women, to describe the economic conditions that **fuel** and enable battering and restrict women's choices, and to highlight the need for finding of shelters, hot lines, and networks as well as the need for adequate economic resources for women to leave men who beat them.

Types of Violence: Domestic Violence

Data Sources: **Case histories**, the Pennsylvania Coalition Against Domestic Violence and the National Women Abuse Prevention Project.

Methods: Review article

Measurement: Not applicable

Sample Size: Not applicable

Period of Study: Not applicable

Costs: **Costs are** not given. Battering is the single greatest cause of injury to women; it is responsible for more injuries than auto accidents, muggings, and rapes **combined**. Women **often** cannot support themselves and their children **if they** leave their spouses, forcing them to stay in an abusive relationship.

Prevalence: Not stated

Incidence: A battering incident occurs every 18 seconds (Federal Bureau of Investigation). More than one million women seek medical assistance for injuries caused by battering (U. S. Department of Justice). During a six-month period following an incident of domestic violence, approximately 32% of women are victimized again. One of every three homeless individuals identifies domestic violence as the reason for his or her **homelessness**. In general, 75% of battered women who are killed lose their lives after separation.

Mental Health Consequences:Not stated

Critique: This is a descriptive article that focuses on the economic toll on women who are victims of domestic violence. Costs are not presented.

Title of Paper: Spouse Abuse Care Goes Beyond the Office Door

Author(s): D. Michael Hunt, M.D.

Publication: Postgraduate Medicine, 87(2), 130-135, 1990.

Objectives: To **identify** some common characteristics and physical signs to alert physicians to the possibility that their patient may be a battered woman.

Types of Violence: **Wiie** abuse and husband abuse.

Data Sources: Not applicable.

Methods: A discussion of the incidence, characteristics, documentation, and management of abuse, aimed at physicians.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Cite study of \$44 million in medical care costs.

Prevalence: Cite study indicating **3.8%-4.1%** rate of spouse abuse. One wife beaten every 7.4 seconds in the U.S.A.

Incidence: **1,300 women in 1984** died from spousal homicide; 28,700 emergency room visits. Incidence of pregnancy battering = 63%. Husband injuries by spouse = 470,000 per year.

Mental Health Consequences: 10% of battered women attempt suicide and half of these women have repeated attempts. Severe depression. Post-traumatic stress disorder.

Critique: This is a review article in a practitioner's journal aimed at a general medical audience. No new data are presented.

Title of Paper: Violence Against Women

Author(s): The Jacobs Institute of Women's Health

Publication: The Women's Health Data Book, Second Edition, Chapter 6: 122-127, 1995.

Objectives: To report data on physical violence based on nationally reported data.

Types of Violence: Rape, battering, homicide and elder abuse

Data Sources: Federal Bureau of Investigation Uniform Crime Reports and the US Department of Justice's National Crime Victimization Survey

Methods: Review article

Measurement: Not applicable

Sample Size and Demographics: Not applicable

Period of Study: Not applicable

Medical Care Use: More than 1 million women seek medical assistance each year for injuries caused by battering; 22-35% of women treated in hospital emergency departments have injuries or symptoms associated with physical abuse.

Costs: Not stated

Prevalence: **Rape:** Average annual rate of rape was 1.3 per 1,000 females aged 12 and over during 1987-1991 or 133,000 women were victims of rape each year. Rates per 1,000 females varied by demographic characteristics: white-1.1, black-2.0, other race-1.3; Hispanic-1.1, non Hispanic-1.2; age(years) 12-19-1.8, 20-24-3.1, 25-34-1.5, 35-39-.07, 50-64-0.2; never married-2.9, married or widowed-0.3, separated or divorced-2.8.
Battering: About 2 million women are severely assaulted each year by male partners and is a major cause of injury to women in the US. Prevalence of physical abuse during pregnancy ranges from 8% to 17%.
Homicide: One of siii homicides involves a family member. About half of these murders are committed by spouses, and women are 1.3 times more likely than men to be victims.
Elder abuse: Estimates range from 4% to 10%.

Incidence: 53% of all attempted or completed rapes were reported to police.

Critique: **This** is a summary review article that points out that although a great deal of attention has been given to the issue of violence in the American **family**, available data are limited and provide conservative estimates of the problem.

Title of Paper: Incidence and Correlates of Post-traumatic Stress Disorder in Battered Women: Shelter and Community Samples

Author(s): Anita Kemp, Bonnie L. Green, Christine Hovanitz, and Edna I. Rawlings

Publication: Journal of Interpersonal Violence, 10:43-55, 1995.

Objectives: To identify characteristics of battery the social environment in which it occurs with post-traumatic stress disorder (PTSD).

Types of Violence: Domestic violence, verbal abuse, childhood physical and sexual abuse history, prior adulthood sexual abuse, sexual assault by partner.

Data Sources: Questionnaire study of 179 battered women and 48 non-battered, verbally abused women. Participants were recruited from shelters, battered women's support groups: therapist referrals, and newspaper advertisements.

Methods: Not stated.

Measurement: PTSD was measured using the Mississippi Scale for PTSD (MPTSD) and the PTSD Self-Report Scale (PTSDR). Degree of domestic violence was measured using the Conflict Tactics Scale, Form R (CTS).

Sample Size and Demographics: 227 women. **Age:** The modal age category for both battered and non-battered groups was 21-30. **Race:** battered women: European American--82%, African American--14%, others not stated; non-battered, verbally abused women: European American--85%, African American, 10%, others not stated.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable.

Incidence: Not applicable.

Mental Health Consequences: Using the PTSDSR, 81% of the battered women and 63% of the non-battered, verbally abused women met PTSD criteria. Using the MPTSD with a cutoff score of 107, 43% of the battered women and 21% of the non-battered, verbally abused women met PTSD criteria.

Critique: Although recruitment methods moved beyond clinical studies to sample non-help-seeking populations also, it is unclear whom the results generalize to. A strength of the study is the use of multiple, well-validated measures.

Title of Paper: The Continuum of Violence Against Women: Psychological and Physical Consequences

Author(s): Marjorie Whittaker Leidig, Ph.D.

Publication: College Health, 40:149-155, 1992.

Objectives: To raise awareness of college health practitioners of the spectrum of violence against women.

Types of Violence: Street hassling, grabbing, obscene telephone calls, voyeurism, exposure, lesbian baiting, prostitution, pornography, medical violence, sexual harassment, abuse by professionals, rape, domestic violence, incest.

Data Sources: Psychological, psychiatric, medical, and popular literature.

Methods: Literature review.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not measured.

Prevalence: Cites another review indicating that 24% of women are raped in their lifetimes, 31% experience attempted rape, and 20% to 30% have an unwanted childhood sexual encounter with an adult male.

Incidence: Not stated.

Mental Health Consequences: Literature is reviewed suggesting that depression, borderline personality disorder, multiple personality disorder, and post-traumatic stress disorder are related to violence against women.

Critique: This is a selective literature review that attempts to integrate the psychological and physical health consequences of all forms of violence against women. Because it does not disaggregate these, the role of domestic violence specifically is unclear.

Title of Paper: Family Violence: A Macroeconomic Approach

Author(s): Sharon K. Long, Ann D. White, and Patrice Karr

Publication: Social Science Research, 12, 363-392 (1983)

Objectives: To develop a formal model of violence between adult family members studies and family violence

Types of Violence: Family violence

Data Sources: Sociological literature on family violence and social exchange and the literature on the economic theories of crime and family.

Methods: Mathematical modeling techniques of economic theory are used to derive testable hypotheses concerning the ways in which various factors affect the level of family violence. Traditional economic techniques assumptions are used in developing the model, guided by sociological research when portraying interpersonal relations.

Measurement: The following variables are measured: family income, estimates of the probability that external interventions will occur, estimate of the time required to cope with external interventions, costs of external intervention, statutory fines, dictator's (dominant family member) wage, victim's disposable income outside marriage, number of children and dependent adults for whom victim would be responsible if he/she left the family, distance from supportive family, individual attitudes to violence, work leisure, risk, and the family.

Sample Size: Not applicable.

Period of Study: Not applicable.

Costs: Not applicable.

Prevalence: Not applicable.

Incidence: Not applicable.

Findings: A decrease in the dictator's internal sanctions against violence would be expected to increase the amount of time allocated to violence by the dictator. Further, if the level of fines and other monetary costs imposed by external agencies (e.g. the courts) as a result of family violence do not vary the level of violence, then the model indicates that an increase in such monetary sanctions will cause a reduction in the amount of time that the dictator allocates to violence. If both the dictator and the victim are risk neutral, an increase in the probability of external intervention will decrease the time allocated to violence. In addition, increases in the opportunities available to the victim outside the marriage will tend to improve

the well-being of the victim in the marriage even if it has no effect on the time allocated to violence by the dictator.

Critique: This paper represents a **first** attempt to **formally** model violence within a family in a structured way. **According** to the authors, the concept of violence as a time allocation choice is too simple. The model should be extended to include the severity, frequency, and duration of violence as the use of violence as a control mechanism by the dictator and to incorporating uncertainty in the victim's responses to the dictator's use of violence.

Title of Paper: Sexual Assault and Domestic Violence in African American Communities

Author(s): Clifton E. Marsh

Publication: The Western Journal of Black Studies. 17(3): 149-155, 1993.

Objectives: To examine and review the incidence of sexual assault and domestic violence within the African-American community.

Types of Violence: Domestic violence; sexual assault.

Data Sources: A descriptive review paper that cites secondary sources drawn from domestic violence and sexual abuse articles in journals and books.

Methods: Not applicable.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not stated.

Prevalence: Violence of some nature occurs in 50% of American households; 63% of reported battered women are white, 37% are African American. Spouses account for 29% of domestic violence, immediate family members cause 15% of intimate violence, live-in partners account for 27% of assaults, while former spouses, boy or girl friends account for 27%, and other relatives, in-laws, inflict 8% of domestic violence on women in the home.

Incidence:

Mental Health Consequences: The author notes that substance abuse is a contributing factor to domestic violence, especially mind-altering drugs which distort an individual's perception of reality. The battered women often suffer from low self-esteem, is usually passive, and ashamed of the abusive situation.

Critique: This article presents an African-American perspective of domestic violence among the Black community, highlighting the prevalence of sexism and chauvinism and displaced anger projected upon women. No cost data are presented.

Title of Paper: Physician's Role in the Fight Against Family Violence: Breaking the Cycle, Controlling the Costs

Author(s): Robert E. McAfee, M.D.

Publication: NCMJ 1994, 55(9), 398-399.

Objectives: To impart the need for the medical profession to respond to the public health crisis of domestic violence in the U.S.

Types of Violence: Domestic, child and elder abuse.

Data Sources: No source given for numbers cited.

Methods: Not applicable.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: The direct medical costs of all violent injuries in the U.S.A. Estimated at \$10 billion in health-related costs per year, \$23 billion in lost productivity, and almost \$145 billion in reduced quality of life. Domestic violence results in 30,000 ER visits, 40,000 physician visits, and 100,000 days of hospitalization every year. Non-monetary costs are incalculable.

Prevalence: Domestic violence: Every 12 seconds a woman is physically abused. More than 35% of the women treated in **ER's** are victims of violence. More than one-third of pregnant women are abused. 2.5 million children reported to have been abused or neglected in 1991. Millions of elderly Americans are abused each year.

Mental Health Consequences: Not stated.

Critique: This is a published speech which contains many numbers but no sources and therefore is not useful for cost estimation purposes.

Title of Paper: Assessing for Abuse During Pregnancy

Author(s): Judith McFarlane, DrPH; Barbara Parker, PhD; Karen Soeken, PhD; Linda Bullock, MS

Publication: JAMA, 267(23), 3 17-3 178, 1992.

Objectives: To assess the occurrence, frequency, and severity of physical abuse during pregnancy and associated initiation of prenatal care.

Type of Violence: Physical abuse during pregnancy.

Data Sources: Personal survey.

Methods: The study's design was a Stratified prospective cohort analysis at public prenatal clinics in Houston and Baltimore. Initial screening assessment followed by more detailed survey.

Measurement: The Abuse Assessment Screen (MS), Conflict Tactics Scale (CTS), Index of Spouse Abuse (ISA), Danger Assessment Screen @AS).

Sample Size and Demographics: Size: 691 prenatal women. Age: most women 20-29 years, with 3 1% being teenagers. Race: Black = 267, Hispanic = 236, white = 188. Marital Status: married = 35%. Economic Status: poverty levels = 95%. Primigravidas = 32%.

Period of Study: Not applicable.

Costs: Not applicable.

Prevalence: 17% of women reported abuse during pregnancy and 60% of abused women reporting two or more episodes of violence.

Incidence: Not applicable.

Mental Health Consequences: Not applicable.

Critique: The data for this study were self-reported. These reports of abuse were not validated by emergency departments or police reports; hence this limits generalizability to other populations. The study is important as it is a cohort study of three racial groups. Of note is that "white" women suffered most from frequency and severity of abuse. As well, the authors point out that abuse during pregnancy may act as a barrier to attending prenatal care; indeed, twice as many women abused or nonabused commenced their care during the third trimester of their pregnancies. Again, this study shows that this phenomenon of abuse during pregnancy occurred at double the rate previously reported.

Title of Paper: A Study of Battered Women Presenting in an Emergency Department

Author(s): Susan V. McLeer & Rebecca Anwar

Publication: American Journal of Public Health 1989, 79(1), 65-66.

Objectives: To determine if through the use of a specific protocol, screening for women's injuries caused by battering could increase the percentage of identified battered women.

Types of Violence: Domestic violence.

Data Sources: Medical records from the Emergency Department of the Medical College of Pennsylvania.

Methods: 1) A retrospective record review of random selected cases of female trauma (excluding motor vehicles and natural disasters) that presented in the emergency department of the specific hospital. 2) Triage nurses in the same emergency department were trained to administer a protocol designed to identify battered women over a 12-month period. The protocol's questions were aimed at eliciting a trauma history and if someone had caused the injuries sustained by the women.

Measurement: The following system for classifying battered women was used: 1) Positive: Injury was attributed to spouse or boyfriend in the medical record of the event. (2) Probable: The record reports that the patient was beaten, kicked, hit, punched, but no personal etiology was noted. (3) Suggestive: The recorded etiology of the injury did not seem to account adequately for the injury. (4) Negative: Nothing in report of the injury would raise suspicion that injury was a result of battering

Sample Size and Demographics: Size: n in 1976; n in 1977 = 412; race: primarily Black; economic status: primarily lower socioeconomic; location: inner city.

Period of Study: Retrospective review of medical records in 1976; and a pilot study in 1977.

Costs: Not stated in pilot study (cites the 1973-79 National Crime Survey statistics for total annual health care costs as \$44,393,700 with 175,000 lost days from paid work by battered women).

Prevalence: 1) Retrospective review = 5.6% of women injured by battering; 2) Pilot study after introducing protocol 30% of women identified by use of the protocol for battering injuries.

Incidence: Not stated

Mental Health Consequences: Not stated.

Critique: The study meets its stated objective of improved identification of women for injuries caused by battering **from** a partner through the use of the protocol. The study samples are not representative of the larger population of battered women, which limits the generalizability of the efficacy of this protocol.

Title of Paper: Victim Costs of Violent Crime and Resulting Injuries

Author(s): Ted R. Miller, Mark A. Cohen, and Shelli B. Rossman

Publication: Health Affairs, pp. 186-197, Winter 1993

Objectives: To estimate the cost of violent crime to victims

Types of Violence: Rape, robbery, assault, arson, murder

Data Sources: Multiple sources including the Uniform Crime Reports, National Crime Survey, vital statistics data, Detailed Claims Information database of the National Council on Compensation Insurance, 1980 National Medical Care Utilization and Expenditure Survey, Vanderbilt/Urban Institute Cost of Crime Study, and various research studies.

Methods: The cost framework and methods build from earlier studies. Three categories of costs are estimated: (1) direct losses other than property losses, (2) productivity losses -- wage, fringe benefits and housework, (3) nonmonetary losses-- pain suffering, and lost quality of life. Annual losses are estimated for each type of crime. The general approach to estimating medical costs is to estimate the incidence from survey data and literature reviews and to apply average costs or charges to obtain total costs. Productivity losses are based on lost workdays, lost housework days and lost school days and appropriate average values. Nonmonetary costs of pain and suffering values are based on willingness-to-pay estimates and jury compensation. Quality-adjusted life years lost are estimated using previously developed methods, then multiplied times a value per life year lost.

Measurement: Incidence-based human capital and willingness to pay approaches.

Sample Size: Not applicable

Period of Study: 1987-1990

Costs: The lifetime costs of criminal victimizations based on average annual incidence from 1987 to 1990 in 1989 dollars as summarized below:

Lifetime Cost of Criminal Victimization, 1989
(in millions)

Cost Category	Rape	Robbery	Assault	Arson	Murder	Total
Total monetary	\$483	\$1,652	\$7,894	\$200	\$13,564	\$23,793
Total mental health	8,294	15,349	52,853	127	0	76,623
Quality of life	1,364	6,090	35,279	526	34,677	77,936
Total	10,141	23,091	96,026	853	48,241	178,352

Prevalence: Not stated.

Incidence: Annual crime victimizations, 1987- 1990 and number of people victimized, killed, nonfatally injured, and hospitalized in 1987 are summarized below:

	(in thousands)				
	Rape	Robbery	Assault	Arson	Total
Victimizations	229.0	1,482.0	9,126.0	105.0	10,942.0
Victims	148.0	1,071.0	4,947.0	105.0	6,271.0
Deaths	0.3	2.5	16.7	0.8	20.2
Nonfatal injury victims	90.0	383.0	1,412.0	15.0	1,900.0
Hospitalized injury victims	6.0	30.0	60.0	-	96.0

Mental Health Consequences: See costs above

Critique: This article combines incidence and costs of various crimes into a single, readily understood **metric**. Costs of domestic violence are not separated.

Title of Paper: Crime in the United States: Victim Costs and Consequences

Author(s): Ted R Miller, Mark A Cohen, and Brian Wiersema

Publication: Unpublished manuscript, May 3 1, 37 pages, 1995

Objectives: To present the results of a two-year **multi-disciplinary** research effort to estimate the costs and consequences of personal crime on Americans.

Types of Violence: Domestic violence, **fatal** crimes, child abuse, rape and sexual abuse, other assault, robbery, drunk driving, arson, larceny, burglary, motor vehicle theft.

Data Sources: Multiple sources including the Uniform Crime Reports, National Crime **Victimization** Survey, vital statistics data, National Incidence and Prevalence Survey of Child Abuse and Neglect, National Family Violence Surveys (Gelles and Straus) National Women's Study, 1993 Commonwealth Fund Survey of Women's **Health**, National Fife Incident Reporting System, 1992 National Household Survey on Drug Abuse, Best's Review and Preview, US Statistical Abstract and various research studies.

Methods: **This** study focuses on victim's costs; society's response to victimization is omitted. To victims, **the** costs are : (1) out-of-pocket expenses such as medical **bills** and property losses, (2) reduced productivity at work, home, and school, and (3) nonmonetary losses- such as fear, pain, **suffering**, and lost quality of life. Annual losses are estimated for each type of crime. The general approach is to estimate the incidence **from** survey data and literature reviews and to apply average costs or charges to obtain total costs.

Nonmonetary costs, such as productivity losses, are based on lost workdays, lost housework days and lost school days and appropriate average values. Pain and **suffering** values are based on willingness-to-pay estimates. For fatalities, a \$2.7 million value of saving an anonymous life was derived **from** a synthesis of almost 50 published values, adjusted for the **difference** in expected life span of crime victims (by type of crime). The nonfatal quality of life estimates come **from** regression analysis **of jury** verdicts.

Measurement: Incidence-based human capital and willingness to pay approaches.

Sample Size: Not applicable

Period of Study: 1993

Costs: The cost of victimization per person (**summarized** below) includes the following: direct medical, mental health care, police and fire services, social and victim services, and property costs; victim productivity losses; and pain, **suffering**, and quality of life. Roughly 77% can be attributed to non-monetary losses (pain, suffering, and quality of life). The remaining 23% include direct monetary losses to victims (medical and other tangible costs).

The annual losses due to crime in 1993 dollars are summarized below by type of crime and for domestic violence:

Annual Losses due to Crime, by Type of Crime, 1993

Type of Crime	Medical	In Millions of Dollars		
		Other Tangible	Quality of Life	Total
Fatal crime	\$700	\$32,700	\$60,000	\$93,000
Child abuse	3,600	3,700	48,000	56,000
Rape & Sexual Abuse	4,000	3,500	119,000	127,000
Other Assault	5,000	10,000	77,000	93,000
Robbery	600	2,500	8,000	11,000
Drunk Driving	3,400	10,000	27,000	41,000
Arson	160	2,500	2,400	5,000
Larceny	150	9,000	1,800	9,000
Burglary	30	7,000	500	9,000
Motor Vehicle theft	9	6,300		7,000
Total	18,000	87,000	345,000	450,000

Incidence and Aggregate Annual Cost. of Adult Domestic Violence of Violent Behavior, 1993

	Fatal Crime	Rape	Other Assault	Robbery	Total
Number of victims	4,001	259,000	1,960,000	40,000	2,300,000
Aggregate costs (millions)					
Medical	\$85	\$389	\$1,322	\$21	\$1,800
Other tangible	4,000	400	2,700	90	7,000
Quality of life	7,700	24,000	26,000	270	58,000
Total	12,000	25,000	30,000	380	67,000

Prevalence: Not stated.

Incidence: See number of victims of domestic violence above.

Mental Health Consequences: The costs of mental health care per criminal victimization are estimated as follows: Fatal crime-\$4,800, child abuse-\$2,500, rape & sexual assault--\$2,200, other assault-\$76, robbery-\$66, drunk driving-\$82, arson--\$18, larceny--\$6, burglary--\$5, motor vehicle theft--\$5.

Critique: This a lengthy and comprehensive paper covering the costs of violent behavior of all types, including domestic **violence**. For domestic violence costs, however, details on estimation methods and sources of data are not described.

Title of Paper: Victims of Violence: Aspects of the "Victim-to-Patient" Process in Women

Author(s): Rebeka Moscarello, M.D.

Publications: Canadian Journal of Psychiatry, **37(7)**: 497-502, 1992.

Objectives: Reviews the process by which a victim of sexual assault suffers mental health consequences.

Types of Violence: **Sexual** assault, sexual abuse, wife assault.

Data Sources: Literature review.

Methods: Not applicable.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not stated.

Prevalence: Cites 33% of women experience unwanted sexual contact by the age of 18 years. 20% of adult women will experience sexual assault **and 6%** unwanted vaginal penetration in their lifetime. 10% of women will be physically abused in a relationship.

Incidence: Not stated.

Mental Health Consequences: (Cites **from** recent studies.) Psychiatric patients and outpatients reveal higher than expected childhood rates of abuse. A history of child trauma is found in 81% of patients in an outpatient clinic. Multiple personality disorder, borderline personality disorder, somatoform disorder and post-traumatic stress disorder are common diagnoses among women. Alcohol and drug abuse with prostitution is still being investigated for association purposes. Post-traumatic stress response. Shame and psychological sequelae. Denial of the abuse. Depression; phobias; somatoform disorders; panic disorders.

Critique: Reviews the literature on how victims become patients with mental health problems. Doesn't include any new data.

Title of Paper: Verbal Abuse and Physical Violence Among a Cohort of Low-Income Pregnant Women

Author(s): Patricia O'Campo, Ph.D., Andrea C. Gielen, Sc.D., Ruth R. Faden, Ph.D., Nancy Kass, Sc.D.

Publications: Women's Health Issues 4:29-37, 1994

Objectives: To report on 1) the frequency of specific types of violent acts that pregnant women experience; 2) the perpetrators of such violent acts; and 3) the impact of violence during pregnancy on birthweight and pre-term birth among a sample of low-income women, a group at increased risk for both violence during pregnancy as well as poor pregnancy outcomes.

Types of Violence: Physical violence and verbal abuse.

Data Sources: Survey instrument

Methods: Women attending the Johns Hopkins Hospital Adult Obstetrical Clinic. Women were interviewed three times during their course of their prenatal care.

Measurement: Questionnaire included items from the Conflict Tactics Scale (CTS). Questions concerning violence were included in the third interview.

Sample Size and Demographics: Total = 567 women (1 st interview); 456 (2nd interview) and 363 (3rd interview). Age 18-19 years = 28%; 20-24 years = 41%. Race: African-American = 90%; White = 9%, Asian or Native American = 1%. Education level: x = 11.4 years. Marital status: married = 11%. Economic status: 62% of women had total incomes of \$10,000 or less.

Period of Study: December 1989 - September 1990.

Costs: Not stated.

Prevalence: 65% of women experienced either verbal abuse or physical violence. Of these women, 20% experienced moderate or severe violence. Some 4% of these women experienced severe violence more than four times during the 6 months preceding the interview. 45% reported verbal abuse.

Incidence: 72 women experienced moderate/severe violence during their pregnancies.

Mental Health Consequences: High rates of alcohol consumption and substance use.

Critique: Data do not permit identification of separate episodes, severity of abuse, use of services, or abuse during specific time during pregnancy. Unlike previous studies, this study found young women to be more at-risk to verbal abuse and physical violence than older women.

Title of Paper: Violence by Male Partners against Women during the Childbearing Year: A Contextual Analysis

Author(s): Patricia O'Campo, Ph.D., Andrea C. Gielen, Sc.D., Ruth R. Faden, Ph.D., Xiaonan Xue, M.S., Nancy Kass, Sc.D., and Mei-Cheng Wang, Ph.D.

Publications: American Journal of Public Health 1995, 85(8): 1092-1097.

Objectives: To include both individual and neighborhood-level variables to predict risk of domestic violence.

Types of Violence: Domestic violence.

Data Sources: Personal and phone survey, Census data.

Methods: A reanalysis of a previous study of physical violence perpetrated by male partners during the childbearing year that used only individual level data. This reanalysis included variables describing the neighborhoods where the women lived. Logistic regression was used to analyze the neighborhood-level variable.

Measurement: The Conflict Tactics Scale (CTS) was used to create three social support scales. Neighborhood level data from the Census were used to measure social class, crime rates, and other sociodemographics.

Sample Size and Demographics: (Previous study). Size: 182 low-income women. Age: 18- 20 years = 32, 20-24 years = 31, 25-30 years = 25, > 30 years = 17. Economic status: employed = 25%, < \$8,000 pa = 48%, \$8001-11,000 = 33%, \$11,001-13,500 = 11%, > \$13,500 = 8%. Unemployment rate = 9.5 (mean). Race: African-American = 93%. Marital status = 10%. Educational level: < high school = 41%, high school = 51%, > high school = 8%.

Period of Study: Not applicable.

Costs: Not applicable.

Prevalence: Partner-perpetrated violence = 38%. Calculated odds ratios of violence for a number of individual and neighborhood-level variables.

Incidence: Not applicable.

Mental Health Consequences: Not stated (not appropriate).

Critique: Found that incorporating "contextual" neighborhood-level variables increases the model's predictive ability. This is more a methodological paper than a study.

Title of Paper: Physical and Emotional Abuse in Pregnancy: A Comparison of Adult and Teenage Women.

Author(s): Barbara Parker, Judith McFarlane, Karen Soeken, Sarah Torres, Doris Campbell.

Publication: Nursing Research, 1993, -(1), 173-178.

Objectives: To compare the rates of physical and mental abuse experienced in a sample of adult and teenage pregnant women.

Types of Violence: Domestic violence--physical and emotional abuse.

Data Sources: Survey at prenatal clinics.

Methods: All new maternity clients at several urban public health prenatal clinics were assessed for abuse. Screening questions were asked in a private setting by clinic nurses. Following the assessment, all women (both abused and non-abused) completed the survey instruments. All instruments were conducted in English or Spanish. Instruments were readministered during the second and third trimester. When abuse was self-reported, the nurses provided counseling, information, and referrals.

Measurement: The Abuse Assessment Screen (AAS) was used as the initial screen. Physical and mental abuse were measured using the Index of Spouse Abuse (ISA) and the Conflict Tactics Scale (CTS). Finally, the Danger Assessment Screen @AS) was administered to women reporting abuse to assist in determining potential risk of homicide.

Sample Size and Demographics: Size = 69 1 pregnant women, 2 14 (3 1%) were teens. Age = 1) Teenagers = 13-19 years, M=17.5; 2) Adults = 20-42 years, M=25.4. Location = 100% urban residents. Race = 38% At&an-American, 34% Hispanic (primarily Mexican-American), and 27% white. Economic status = 95% below the poverty level. Marital status = 22% of teens were married, 39% of adult women were married. Parity: First pregnancy for 18% of teens and 63% of the adults.

Period of Study: Three trimesters, nine months. (Actual date not stated.)

Costs: Not applicable.

Prevalence: The overall rate of abuse during pregnancy was found to be 21.7% for teens and 15.9% for adult women. Physical or sexual abuse during the year prior to the first prenatal visit was 26%: 3 1.6% for teens and 23.6% for adults.

Incidence: 29 (8%) of the non-abused women reported abuse beginning in the second or third trimester.

Mental Health Consequences: 14% of abused women experienced nonphysical abuse (on the ISA scale) including 16.9% of adults and 8.5% of teens. Using the verbal aggression subscale of the CTS, the rates were 47.3% for adults and 25.4% for teens.

Critique: This study contains a **useful** literature survey. The sample size allows for comparison of teen and adult abuse rates. The design is prospective, and appears to be well-done. Neither dates nor locations are given.

Title of Paper: Spouse or Partner Abuse, Use of Health Services, and Unmet Need for Medical Care in U.S. Women

Author(s): Stacey B. Plichta, Sc.D. and Carol S. Weisman, Ph.D.

Publications: Journal of Women's Health, 4(1): 45-53, 1995.

Objectives: To examine the relationship of spouse or partner abuse to the use of health services and to unmet need for health care in a representative sample of U.S. women.

Types of Violence: Domestic violence.

Data Sources: 1993 Women's Health Survey (WHS).

Methods: Analysis of data from the Women's Health Survey, a nationwide telephone survey, conducted by Louis Harris and Associates for the Commonwealth Fund.

Measurement: Conflict Tactics Scale (CTS). Use of health services in the past year was measured by the number of physicians seen, the number of physician visits made and times when a woman needed care, but did not get it. Measures of predisposing factors, enabling factors, need measures, physical health, chronic conditions. Rosenberg Self-Esteem Scale. Centers for Disease Control Depression Scale (CED-D).

Sample Size and Demographics: Size = 1324 women, aged 18-64 years, who were living with or married to a man at the time of the survey. **Ethnicity:** white = 83.2%, Latino = 7.8%, African-American = 8.9%. Marital status: legally married = 91.2%. Cohabiting = 8.8%. Children in household: none = 42.6%, one more = 57.4%. Education level = less than high school = 15.5%, high school only = 40%, post-high school = 19.1%, graduate/post-graduate = 25.4%. Economic status = < \$15,000 = 14.4%, \$15,000-25,000 = 34.2%, \$25,000-100,000 = 51.5%.

Period of Study: February 10, 1993 and March 21, 1993.

Costs: Not stated, but the use of health services in the last year was measured. Abused and non-abused women saw physicians 2.09 and 2.04 times, respectively. Mean number of physicians visits was 7.44 for abused partners and 6.03 for those not abused. However, Women who were exposed to spouse or partner abuse are three times as likely as other women to report having had an unmet need for medical care in the past year.

Prevalence: 8.4% of women report being exposed to physical abuse by their spouses in the past year, and 3.2% report being severely abused. Translating these statistics to the U.S., it is estimated that in 1991, 4.4 million women were physically abused by a spouse/partner and that 1.7 million of these women experienced severe abuse.

Incidence: Not stated.

Mental Health Consequences: Depression/anxiety diagnosis - 17.4% (in past 5 years). Depressive symptoms - 16.3%. Suicidal thoughts - 1.2% in past year. These rates are for women exposed to spouse abuse.

Critique: Limitations of this study are its cross-sectional design and its dependence on retrospective data, inviting recall bias. In addition, it is likely that traumatic events such as spouse or partner abuse are underreported.

Title of Paper: The Incidence of Wife Abuse and Mental Health Status in Abused Wives in Edmonton, Alberta

Author(s): Pamela A. Ratner, R.N., M.N.

Publication: Canadian Journal of Public Health 84:246-249, 1993.

Objectives: To estimate the prevalence of wife abuse and its mental health correlates.

Types of Violence: Domestic violence, psychological abuse.

Data Sources: Sample survey of 406 women who were married or cohabiting or who had been married or cohabited within the past year, and were 18 or older and resided in Edmonton, Alberta, Canada.

Methods: Telephone survey.

Measurement: The Conflict Tactics Scale (CTS) was used to measure violence. The General Health Questionnaire (GHQ) was used to assess mental health status. The CAGE was used to screen for alcoholism.

Sample Size and Demographics: 406 women. **Age:** $M = 39.4$ years, $s.d. = 14.3$, range 18-82; 18-34--49%, 35-44--20%, 45-64--24%, 65 and over--7%. **Marital status:** married -- 82%, cohabiting-- 13%, formerly married--4%. **Employment status:** employed full time-- 41%, employed part time--21%, unemployed-- 1%, retired-- 13%, student--3%, disabled-- 1%. **Education:** less than 8th grade--2%, 8-10 years--11%, 11-12 years--40%, some college--33%, bachelor's degree--12%, post-bachelor's degree--3%. **Individual income:** under \$10,000--38%, \$10,000-19,999--25%, \$20,000-29,999--16%, \$30,000 or more--12%. **Household income:** under \$20,000--10%, \$20,000-29,999-- 16%, \$30,000--49,999--36%, \$50,000 or more--25%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: 10.6% reported physical abuse (domestic violence) during the previous year. An additional 13.1% reported psychological abuse. 93% of physically abused women were also psychologically abused.

Incidence: Not measured.

Mental Health Consequences: Mean GHQ total scores and mean subscale scores on somatic complaints, anxiety and insomnia, social dysfunction, and depression were higher for physically abused women than non-abused, women. Physical abuse was associated with GHQ total score over and above effects of age, household income, and psychological abuse. 16.3%

of physically abused women and 11.3% of psychologically-abused women met CAGE criteria for alcohol dependence, compared to 2.4% of non-abused women.

Critique: Although the sample was relatively small, well-validated instruments were used and analyses established association of domestic violence with mental health problems that was independent of both demographic characteristics and psychological abuse. The GHQ does not measure diagnosable mental disorders, and lack of information on age of onset of symptoms and abuse precludes inferences about causal direction.

Title of Paper: Comparison of MMPI Psychopathic Deviate Scores of Battered and Nonbattered Women

Author(s): Nancy R. Rhodes

Publication: Journal of Family Violence, 7: 297-307, 1992.

Objectives: To evaluate the prevalence of scale 4 elevations in battered women.

Type of Violence: Domestic violence.

Data Sources: Clinical records of women seeking treatment at an outpatient domestic violence clinic.

Methods: Analysis of MMPI data that were routinely collected from all clients at intake. Comparison to women seeking treatment at a community counseling clinic who did not report physical or sexual abuse.

Measurement: MMPI.

Sample Size and Demographics: 46 battered women, 46 non-battered controls. **Age:** battered women: $M = 32.9$, range 21-45; controls: $M = 31.8$, range 19-61. **Race:** battered women: European American--70%, African American-- 13%, Latina-- 17%; controls: European American--89%, others not stated.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable.

Incidence: Not applicable.

Mental Health Consequences: Battered women scored higher than controls on Scale 4 on both the MMPI and MMPI-2.

Critique: The samples were small and non-representative. MMPI scales are difficult to interpret individually, and are more typically understood as profiles. Abused women might have been included in the control group. Scale 4 scores do not correspond clearly to a specific mental disorder. Causal direction cannot be inferred.

Title of Paper: Battered Women: A Medical Problem Requiring Detection

Author(s): Bruce Rounsaville, M.D. & Myrna M. Weissman, Ph.D.

Publication: International Journal of Psychiatry in Medicine, 8(2), 191-199, 1977-1978.

Objectives: Descriptive study of abused women presenting in ER.

Types of Violence: Physical abuse/battering.

Definition: Any married or unmarried woman over age 16 who had evidence of physical abuse on at least one occasion at the hands of an intimate male partner.

Data Sources: Interview of women presenting at Yale-New Haven Hospital ER.

Methods: Participants, once identified as battered women in an emergency room, and upon consent, were recruited for this small study designed to determine the frequency of the problem over a specific period. Interviews by a psychiatrist and chart reviews of women not willing to be seen by a psychiatrist, and further follow-up with more extensive interviews generated the data for analysis. Participants who accepted free psychiatric follow-up services were interviewed with both structured and open-ended questions. Basic sociodemographic data, medical and psychiatric history, current diagnosis, history of the abusive relationship, and factors conducive to help-seeking were also assessed. In addition, current depressive status was evaluated by use of the CES-D. Patients seen at an affiliated mental health center.

Measurement: CES-D, a 20-item self-report scale for measuring depressive symptoms. The scale range for each response is 0-3, and a total score has a range of 0-60. Scores of 16+ are considered cases of depression. The APA DSM 11 diagnostic assessment tool was also used.

Sample Size and Demographics: 37 battered women were identified (33 from the surgical and 4 from the psychiatric emergency room services). These women represented a broad range of sociodemographic groups. Age: 76% of women were under 35 years old, and age ranged up to 55 years. Race: 33% were Black and 67% were Caucasian. Religion: 46% Catholic, 54% other religions. Marital Status: single = 35%, married = 35%, separated or divorced = 30%. Number of children: 37% = 0, 33% = 1-2, 30% = 3+ children. Social class was heavily representative of the working class, with a small number of highly educated and upper class women. 33% = I and II social class, 11% = III and IV = 36% social class.

Period of Study: An initial one month study followed by an extended 3-month interview for participants on return appointments to the emergency room and those who accepted follow-up psychiatric service.

Costs: Not stated.

Prevalence: 3.8% of women presenting to the surgical and 3-4% of women presenting to the psychiatric services at a specific emergency room of a hospital in Connecticut.

Mental Health Consequences: Results of the APA DSM 11 self-report scale diagnostic assessment showed that 52% of the women had significant symptoms of depression (I.e., sleep disturbance, appetite loss, crying spells, anergy), 12% were diagnosed as overtly or latently schizophrenic. 6% of women were drug abusers. 29% of women were not considered to have a psychiatric diagnosis. Neurotic depression was found in 37% of women, which could reflect the dangerous life situation more than a long-standing psychological defect. The CES-D showed that 80% had significant depression.

Critique: This study is based on a small sample (37) collected over a short time period (1 month), but contains good data on prevalence of DV and the mental health consequences thereof.

Table 4. Depressive Symptoms of Battered Women (N = 31)

Depressive Status (CES-D Score)	Per cent
Asymptomatic (15-less)	20
Mild to Moderate Symptoms (16-32)	60
Severe Symptoms (33-up)	20
	100

Title of Paper: Correlates of Depressive Symptoms Among Battered Women

Author(s): Robin A. Sato and Elaine M. Heiby

Publication: Journal of Family Violence, 7(3),1992.

Objectives: To evaluate the prevalence and correlates of depressive symptoms among battered.

Types of Violence: Domestic violence.

Data Sources: Questionnaire study of 136 women from battered women's groups and shelters, who reported at least one episode of physical violence by their partner within a one-year period.

Methods: Participants completed the questionnaire at their respective treatment sites before beginning treatment.

Measurement: Depression was measured using the Zung Self-Rating Depression Scale (SDS) was used. Domestic violence was measured by the Conflict Tactics Scale, Form N.

Sample Size and Demographics: 136 battered women. Age: $M = 31$, s.d.= 8.6. Race: Hawaiian or part-Hawaiian--35%, European American--25%, Mixed, other than Hawaiian--15%, Japanese--7%, Filipino--4%, African american--2%, Samoan--2%, Chinese-- 1%, other--8%. Marital status: Married--65%, separated--80% [sic]. Household status: Has children--90%.

Period of Study: Not stated. (Women were eligible if they reported domestic violence during a one-year period 1987-88).

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: Mean depression score was 48, mode was 50. 47% met criteria for clinical depression according to Zung's criteria (SDS ≥ 50).

Critique: The sample was relatively large for a clinical sample. The measure of depression was well-validated. However, representativeness of the sample is unclear, and causal direction cannot be inferred.

Title of Paper: Domestic Violence: Legal Issues

Author: Daniel G. Saunders

Publication and Date: In Encyclopedia of Social Work, 19th edition. NASW Press.
Washington, D.C., 1995, p. 789-795

Objectives: To present the historical and chronological perspective for legal responses to domestic violence within the criminal justice system, specifically as it applies to social work practice.

Type of violence: Domestic Violence.

Data Sources: Drawn from legal, social work, and psychiatric literature. ..

Methods: Not applicable

Measurement: Not applicable

Sample Size and Demographics: Not applicable

Period of Study: Not applicable

Costs: Not stated

Prevalence: Not stated

Incidence: Not stated

Mental Health Consequences: Psychological abuse has severe effects and repercussions. Mentions the emotional abuse suffered by children subjected to witnessing their mothers being abused.

Critique: This article discusses incremental changes in the criminal legal system from the 18th century common law to contemporary policy reforms. It is designed specifically for social workers. An emphasis is placed upon the advocacy role for social workers in society as instrumental for societal change pertinent to domestic violence.

Title of Paper: Medical Care Costs of Intrafamily Assault and Homicide

Author(s): Murray A. Straus

Publication: Bulletin of New York Academy of Medicine 62(5), 556-561, 1988.

Objectives: To contribute to the understanding of the costs of violence and homicidal deaths within families.

Types of Violence: Intrafamily assault and homicide.

Data Sources: Multiple sources including two epidemiological community surveys, a national survey and other studies.

Methods: The author estimates the incidence of injuries **from** spouse abuse and **from** child abuse and the number requiring medical care services from various studies and then applies these rates to the number of married persons and children. Then, combining the number of wives, husbands, and children produces the estimated number of people per year requiring medical attention. The author also points out that his estimates are based on assumptions and, since there is no valid method determined, the simplest method is chosen.

Measurement: Not applicable

Sample Size: Kentucky Community Survey- 1,793 women
Texas Community Survey- 1,210 women
1975 National Survey of Family Violence (Straus)-2,143 families

Period of Study: 1982

Costs: **Costs** are not estimated, but the need for medical care is estimated as follows:

- 1,453,437 medical visits per year to treat injuries resulting from an assault on women by a spouse;
- 479,634 husbands injured by wives;
- 1,695,897 medical visits to treat injuries resulting **from** an assault by a parent on a minor child;
- a total of 3,628,965 people each year who need medical attention as a result of an assault by a family member.
- Intrafamily violence thus requires 1,234,000 office visits, 2,141,000 emergency room visits, and 254,000 hospital admissions lasting a day or more.

Prevalence: Kentucky Survey-10% were physically assaulted by their partners during a year; Texas Survey- 8.5% abuse rate for women; child abuse-14% per year.

Incidence: Not stated

Mental Health Consequences: Not stated

Critique: This paper employs a simplistic approach to estimating medical care needs and use. The author points to the need to translate these data into dollar cost estimates and to consider nonmedical costs.

Title of Paper: Physical Violence in American Families: Incidence Rates, Causes, and Trends

Author(s): Murray A. Straus

Publications: Abused and Battered: Social and Legal Responses to Family Violence. Dean B. Knudsen and John L. Miller (eds). New York: A. de Gruyter, 1991, Chapter 2, p. 17-34.

Objectives: To review the incidence, rates, causes and trends of physical violence in American families.

Types of Violence: Domestic violence; child abuse; violence by children.

Data Sources: 1985 National Family Violence Survey.

Methods: Telephone interviews.

Measurement: Conflict Tactics Scales.

Sample Size and Demographics: 6,002 adult couples. National representative sample,

Period of Study: 1985

Costs: Not stated.

Prevalence: 30% of couples experienced a violent altercation during the course of their marriage.

Incidence: 16.1% per 100 couples reported a violent incident during 1985 = estimated 8.7 million couples in U.S.A.; 6.3% reported severe violence; 11.6% - any violence by the husband; 3.4% - severe violence by the husband; 12.4% - any violence by the wife; 4.8% - severe violence by the wife. Child abuse: 2.3% or an estimated 1.5 million American children.

Mental Health Consequences: Not stated.

Critique: This paper summarizes the results of the 1985 National Family Violence Survey and reviews trends in family violence by comparing the changes since the 1975 survey. No cost data are presented.

Title of Paper: The Costs of Family Violence

Author(s): Murray Straus & Richard J. Gelles

Publication: Public Health Reports 1987,102(6), 63 8-64 1.

Objectives: To begin estimating the true cost of intra-family violence by providing preliminary data on the increased risk of psychological problems associated with wife beating and child abuse.

Types of Violence: Spouse violence, wife beating, and child abuse

Data Sources: 1985 National Survey of Family Violence conducted by Straus and Gelles..

Methods: The above survey used the Conflict Tactics Scale (CTS) to obtain data for estimating the incidence rates of physical abuse among children and spouses. The survey included data to enable comparison of specific aspects of the physical and mental health of physically abused family member with persons in the sample reporting no instances of physical abuse.

Measurement: Conflict Tactics Scales for estimating incidence rates for physical abuse of children and spouses. Multivariate Analysis for showing differences between abused and non-abused children for criminal behavior patterns.

Sample Size and Demographics: National Representative Sample. Size = 6,002 American families (3,334 = children).

Period of Study: 1985.

costs: The authors state that methods are being developed to use incidence rates as the basis for rough cost estimates for the medical and non-medical expenses of intra-family violence. Mental health and non-medical costs may be much greater than the actual costs of treatment for physical injuries. Other related costs include psychological services; police services; social services costs including child abuse investigations and remedial actions; legal costs, e.g., divorce costs, and the cost of violence and other crimes committed by those abused in childhood. An earlier estimate by one of the authors put the **1984** cost of intra-family homicide at **\$1.7** billion, considered is an underestimate by the authors.

Prevalence: Not stated

Incidence: Spouse violence: 16.1 victims per 1,000 couples; wife beating (spouse violence): 34 victims per 1,000 couples, or an estimated 1.8 million seriously assaulted wives per year in the USA. Child abuse: An estimated 6.9 million children are severely assaulted each year, or 110 incidents per 1,000 children.

Mental Health Consequences: 1) Wife beating: The survey analysis found that severely assaulted women had much higher rates of psychological distress than other women, including four times the rate of feeling depressed and five-and-a-half-times more suicide attempts; 2) Child abuse: 2-3 times higher rates of trouble making friends, temper tantrums, adverse effects on school performance, and substance abuse.

Critique: This study draws attention to the need for estimating true costs of family violence in the USA, but cost estimates are not presented. The authors state that the estimates of wife beating and child abuse are underestimates because of underreporting of most cases of violence. The authors stress the need for intervention by primary prevention programs for reducing the costs of violence and enhancing the quality of life, and the non-monetary costs of human suffering.

Title of Paper: Societal Change and Change in Family Violence from 1975 to 1985 as Revealed by Two National Surveys.

Author(s): Murray A. Straus, and Richard J. Gelles.

Publication: Journal of Marriage and the Family, 48:465-479, August 1986.

Objectives: To compare the rates for physical violence against children and spouses in 1985 with the rates found in a 1975 study.

Types of Violence: Child abuse, spouse abuse.

Data Sources: 1975 and 1985 national surveys of family violence.

Methods: Both studies used nationally representative probability samples of households. Married or cohabiting persons were interviewed by the Response Analysis Corporation with the use of an interview schedule designed by the author for the 1975 study and replicated in 1985. Data for the 1975 survey were collected by personal interview; the 1985 survey was conducted by telephone.

Measurement: Violence was measured by the Conflict Tactics Scale (CTS).

Sample Size and Demographics: Size (1975 survey) = 2,143 households with a completion rate of 65%. Size: (1985 survey) = 6,002 households with a completion rate of 84%. Race = nationally representative probability sample. Age = representative for adults over 18 years. Children = 3 - 17

Period of Study: Two one-year studies, 1975 and 1985.

Costs: Costs are not stated. Both child and wife abuse are associated with unemployment and economic stress. The economic climate improved in 1985 coinciding with lower economic stress in 1985, contributing to the decline in severe violence. Family therapy during this period was probably the fastest growing human service profession. Shelters for battered women grew from a handful in 1975 to 700 in 1985. Increase in number of child social workers.

Prevalence: Child abuse: minor violence = 1975 -- 630 per 1,000 children, 1985 -- 620 per 1,000 children; severe violence = 1975 -- 140 per 1,000 children, 1985 -- 107 per 1,000 children. Couple violence: severe violence = 1975 -- 61 per 1,000, 1985 -- 58 per 1,000; overall violence: 1975 -- 160 per 1,000 couples, 1985 -- 158 per 1,000 couples

Incidence: Not stated.

Mental Health Consequences: Not stated.

Critique: This paper compares the results from two National Family Violence Surveys conducted ten years apart. The 1985 data showed a decrease in incidence for wife/child abuse compared to the 1975 data. The authors provide some reasons to account for this decrease in incidence. First, from a methodological perspective, the CTS was modified in 1985. The 1975 survey was conducted in person, whereas the 1985 survey was conducted by telephone was shorter in length, resulting in higher response rates in 1985 (85% in 1985 and 65% in 1975). Second, respondents may have been more reluctant to report severe violence in 1985 than in 1975 because of increase in public attention to the problem. Third, there may well be a decline in child abuse and wife beating due to changes in family structure, economic change, increased provision of alternatives for battered women and treatment programs, and increased deterrence efforts.

Largely due to the grass roots consciousness of the women's movement, federal funds eventually were secured to assist in financing shelters and prevention, intervention programs. There has been a significant socio-political shift toward domestic violence, resulting in the law and police becoming more involved in 1985. Child abuse treatment programs, nationwide, could be a factor in the decrease of the child abuse rate. The study's comparative findings have important policy implications and the stress the need to keep vigilant by maintaining agencies/services role in reducing the rates further in the future.

Title of Paper: Psychiatric Disorders of Abused Women at a Shelter

Author(s): Chole Garibay West, M.D., Adelaida Fernandez, M.D., James Randolph Hillard, M.D., Mary Schoof, M.D., and Joseph Parks, M.D.

Publication: Psychiatric Quarterly, 6 1: 295-301, 1990.

Objectives: To evaluate the prevalence of psychiatric disorders of abused women in a shelter.

Types of Violence: Domestic violence.

Data Sources: Clinical interview study of 30 shelter residents selected according to convenience.

Methods: Within the first 2 weeks of the participant's residence at the shelter, she was interviewed using an unstructured clinical interview, followed by structured measures.

Measurement: Depression was measured using the Inventory to Diagnose Depression (IDD) and the Hamilton Psychiatric Rating Scale for Depression (HRD). PTSD was measured using the Post-Traumatic Stress Disorder Structural Clinical Interview for DSM-III-R (SCID) Module. Degree of domestic violence was measured using a Modified Conflict Tactics Scale (CTS).

Sample Size and Demographics: 30 battered women. **Age:** $M = 30$, s.d. = 6.44, range 19-42. **Race:** African American--50%, others not stated. **Marital status:** separated or divorced--67%, others not stated.

Period of Study: February, 1989 - October, 1989.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: Unstructured clinical interviews indicated that 37% of the women had major depressive disorder, 47% had PTSD, 13% had adjustment disorder, 7% had current substance abuse, 3% had schizophrenia, 10% had personality disorders, 3% had panic disorder, and 10% had no disorder.

Critique: The sample is small and the validity of diagnoses from unstructured clinical interviews is questionable, particularly because not even inter-rater reliability is given. Causal direction cannot be inferred. However, the assessment of multiple specific mental disorders and the use and analysis of multiple measures (clinical interview along with SCID, HRD, and IDD) are strengths of the study.

APPENDIX II

SUMMARIES OF DATA SOURCES

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SUMMARIES OF DATA SOURCES

Commonwealth Fund Survey of Women's Health (The Commonwealth Fund)

National Crime Victimization Survey (U.S. Department of Justice, Bureau of Justice Statistics)

National Family violence Survey (Gelles and Straus)

Survey of Violence Against Women (pat Tjaden)

Uniform Crime Reports (U.S. Department of Justice, Federal Bureau of Investigation)

Commonwealth Fund Survey of Women's Health

Sponsor: The Commonwealth Fund

Periodicity: February-March 1993

Purpose: To develop national estimates of indicators of women's health and health problems.

Design: National probability sample of 2,525 women and 1,000 men generated through random-digit dialing. The survey was conducted by telephone.

Content: Estimates of rates of domestic violence including physical assault and forced sexual relations, history of child abuse.

Injury Data: None

Treatment: None

Work loss: None

Criminal Justice costs: None

Psychological consequences: None

Comments: This survey is **useful** solely for calculating prevalence rates for domestic violence. There is no data on effects of incident on victims-- no data on injury, medical care, criminal justice actions, work/activity loss or psychological consequences.

National Crime Victimization Survey

Sponsor: U.S. Department of Justice Bureau of Justice Statistics

Periodicity: Annual

Purpose: To report on Criminal Victimization, both completed and attempted. Offenses measured include personal crimes of rape, robbery, assault, and larceny and the household crimes of burglary, larceny, and motor vehicle theft. Examines the frequency and impact of crimes, characteristics of victims and offenders, circumstances surrounding crimes, and patterns of reporting to the police.

Design: Stratified multi-stage cluster sample of 110,000 people, age 12 and older. Each housing unit remains in the sample for 3 years, with each of seven interviews taking place every 6 months. Separate reports are completed for **each criminal** incident which subjects have experienced in the previous six months. When possible face to face interviews are conducted, the remainder are conducted by telephone. Seventy five percent of interviews are conducted by telephone.

Content: Estimates of rates of criminal victimization are generated for each offense category.

The report includes the following categories:

- General Crime Statistics
- Victim characteristics
- Crime characteristics
- Offender characteristics
- Household characteristics
- Type of Crime
- Reporting to police

Injury Data: Includes questions about injuries hospitalization, medical insurance and medical expenses resulting from incident.

- Was victim injured?
- By a weapon?
- Which injuries?
- Did victim receive medical treatment?
- Where was care received?
- Did victim stay in the hospital?
- How long?
- Was victim covered by medical insurance?
- What was the total amount of medical expenses?

Treatment: None

Work loss: Includes questions about major activity, employment status, type of work and loss of work-time as a result of incident.

Did victim have a job?
What was the victim's major activity?
For whom did the victim work?
What kind of business?
What kind of work?
What were most important duties on the job?
Employee of private company, government or self-employed?
Did victim lose time **from** work?
How much?
Did victim lose pay (uncovered)?
Did victim lose time from work because of related activities (police or court related)?
Any other members of the **family** lose time from work as a result of the incident?
How much?

Psychological consequences: None

Law Enforcement: Includes questions on reports to the police and police action.

Comments: Up until 1992, there are no specific questions which ask about domestic or family violence. The nature of the crime is determined through separate questions about type of crime and characteristics of offender i.e. an assault by a spouse is categorized as an incident of family violence. This created problems from the standpoint of definitions and **reporting**. The NCVS has changed its methodology and now more directly asks respondents about family violence.

Since **75%** of respondents were interviewed by phone, there are possible reporting biases which could result **from** the presence of the spouse at the time of interview. They do have a question about who is present during the interview.

There is no data on severity of injury, no data on type of treatment. Questions on medical expenses may have reliability problems for those whose expenses are paid by insurance. There is no data on disability other than work loss.

National Family Violence Survey

Sponsor/PI: Gelles and Straus

Periodicity: 1975 & 1985

Purpose: (1) To develop national population estimates of intra-family violence. (2) Generate comparisons of the incidence of intra-family violence by race and ethnicity. (3) Generate **state-by-state** estimates of incidence of intra-family violence.

Design: National area probability sample of 6002 adults based on distribution of the adult population of the United States generated through random-digit dialing. The sample included married or cohabiting couples, single parents with children under 18 living in the household, and persons who had been married or living together with a partner of the opposite sex within the last two years. The survey was conducted by telephone.

Content: Estimates of rates of family violence including child abuse and spousal violence.

Data includes:

- styles of discipline
- history of family violence
- conflict resolution styles
- violence against children in past 12 months
- spousal/domestic** violence in past **12** months
- sexual assault in past 12 months
- Household characteristics
- Reporting to police
- Hospital/doctor visits

Injury Data: Includes questions about injuries and hospitalization.

- Was either partner injured?
- Did victim seek medical treatment?
- Where was care received? How many times?
- Did victim stay in the hospital?

Treatment: None

Work loss: Includes questions about employment status, type of work and loss of work-time as a result of incident.

- Did victim have a job?
- Did incident effect job performance?
- Did victim lose time from work?
- How much?

Law Enforcement/Criminal Justice: Includes questions on # of times the police were contacted, arrests, whether cases went to court, and the result of cases.

Psychological consequences: Questions about changes in physical and mental health from before the commencement of violence, help seeking behavior, symptoms of psychological distress, alcohol and drug consumption.

Comments: The NFVS provides data useful for calculating the prevalence of domestic violence among married or cohabiting couples. Although single parents with children under 18 living in the household, and persons who had been married or living together with a partner of the opposite sex within the last two years are included in the sample, married or cohabiting couples compose 87% of the sample. Such a sample cannot be used to calculate the prevalence of domestic violence in the population as a whole since it neglects victims of domestic violence who do not fall into these categories-- persons who do not live with their partner or whose relationship was officially dissolved more than two years before yet maintain a relationship. Since respondents were interviewed by phone, there are possible reporting biases which could result from the presence of the spouse at the time of interview.

The data on medical care does not establish the number of days spent in a hospital. It is impossible to determine how many incidents of violence resulted in injury, medical treatment or hospitalization. There is no data on types and duration of treatment, medication or monetary cost of treatment. There is no data on severity of injury, no data on type of treatment. Questions on medical expenses may have reliability problems for those whose expenses are paid by insurance. There is no data on disability other than work loss.

Survey of Violence Against Women

Sponsor/PI: HHS/Pat Tjaden

Periodicity : Fall 1995

Purpose: To develop national estimates of violence against women.

Design: National probability sample of 8,000 women generated through random-digit dialing. The survey will be conducted by telephone.

Content: Estimates of rates of violence against women including forcible rape, child abuse and spousal/domestic violence. Data includes:

- history of family violence
- spousal/domestic** violence
- sexual assault
- Household characteristics
- Reporting to police
- Hospital/doctor** visits

Injury Data: Includes questions about injuries and hospitalization.

- Was victim injured?
- Did victim receive medical care?
- Did victim receive emergency room services?
- Did victim receive other professional services?
- Did victim receive dental care?
- Did victim receive ambulance services?
- Did victim receive physical therapy?
- Did victim receive home care or visiting nurse services?
- How many times did victim receive care for the injury?
- How were the costs of treatment paid?

Treatment: Did victim receive surgery, bone settings or stitches? Which?

Work loss: Included data on # of days lost from paid employment, child care, household chores, volunteer activities and social/ recreational activities.

Criminal Justice costs: Includes data on whether incident was reported to the police, criminal charges filed, result of the charges and whether a restraining order was obtained.

Psychological consequences: None

Comments: Provides more detailed information on the type of health services received and specific types of medical procedures performed.

Uniform Crime Reports

Sponsor: U.S. Department of Justice, Federal Bureau of Investigation

Periodicity: Annual

Purpose: To index crimes reported to the police nationally. Offenses measured include personal crimes of rape, robbery, assault, and larceny and the household crimes of burglary, larceny, and motor vehicle theft. Examines the frequency of crimes,

Design: Compiled by the FBI from data collected by local law enforcement agencies. Based on records of all reports of crime received from victims, officers who discover infractions, or other sources.

Content: Categories of violent crime indexed include:
Homicide and manslaughter
Forcible rape
Robbery
Aggravated assault

Injury Data: None

Treatment: None

Work loss: None

Psychological consequences: None

Comments: UCR provides the number of homicides known to have been committed by a spouse, boyfriend or girlfriend in a given year. Otherwise, UCR is of limited value for generating cost estimates of domestic violence. Domestic violence is not measured as a discrete category. There are no reports of crime circumstance by relationship of victim to offender in categories other than homicide. There is no data on effects of incident on victims.

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PART II

**THE COST OF DOMESTIC VIOLENCE
TO THE HEALTH CARE SYSTEM**

EXPLORATORY PAPER ON MENTAL HEALTH CONSEQUENCES

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EXECUTIVE SUMMARY

Research on mental health consequences of domestic violence has been difficult to interpret because of competing causal interpretations, which have been complicated by the possible confounding roles of demographic characteristics and childhood sexual abuse. Existing research suggests that rates of depression (15%-83%), suicidality (5%-77%), substance abuse (7%-29%), and posttraumatic stress disorder (31%-84%) among battered women exceed rates in general populations. There is also evidence suggesting that domestic violence is associated with limitations in physical functioning and with mental health problems in the children of battered women.

To estimate the economic costs of the mental health consequences of domestic violence, the following elements are needed:

- accurate data on the prevalence of mental health problems of battered women, functional status of battered women, witnessing domestic violence among children of battered women, and mental health problems among children witnessing domestic violence;
- accurate estimates of use of mental health, hospital (inpatient and emergency room), medical, and social services for mental health problems by battered women;
- accurate estimates of unmet need for mental health care of battered women;
- accurate estimates of the costs of mental health care in the sectors used by battered women; and
- accurate estimates of lost productivity among battered women, including work productivity, child care, and other activities.

Critical review of research on mental health consequences of domestic violence leads to the following recommendations for future research on the mental health consequences of domestic violence:

- The prevalence of mental health problems should be evaluated in general populations of battered and non-battered women. Sampling frames should include both household and institutional (e.g. shelter, military base) populations.
- Special attention should be given to obtaining interviews from women who might decline to participate because of coercion from partners. Special

attention should also be given to privacy during interviews and to recruitment of women with chaotic life situations.

- Multiple mental health problems should be measured using instruments with demonstrated reliability and validity.
- Dates of onset and duration of domestic violence and mental health problems should be recorded, and time since battering should be taken into account.
- Specific violent behaviors (e.g., marital rape) should be reliably and validly assessed.
- Potential batterers should be defined as current or former husbands, unmarried domestic partners, and other intimate partners.
- Research should include reliable, valid measurement of functional limitations among battered and non-battered women.
- Research should include reliable, valid measurement of the mental health problems of the children of battered and non-battered women.

INTRODUCTION

This paper will review evidence on potential mental health consequences of domestic violence. Mental disorders are defined using the definition of the American Psychiatric Association (1994):

a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. (p. xxi)

This paper addresses four main topics:

- Issues in interpreting evidence related to domestic violence and mental health;
- Prevalence of mental health problems and functional limitations among battered and non-battered women, and mental health problems among children of battered women;
- Methods of estimating economic costs of mental health consequences of domestic violence; and
- Methodologic issues.

The paper concludes with recommendations for research.

ISSUES IN INTERPRETING EVIDENCE RELATED TO DOMESTIC VIOLENCE AND MENTAL HEALTH

To estimate the extent of mental health consequences of domestic violence, it is necessary to demonstrate that mental health problems are associated with domestic violence. However, data demonstrating such an association -- like all cross-sectional data showing associations -- are subject to multiple interpretations. Three classes of interpretations are possible:

- Mental health problems cause domestic violence;
- Domestic violence causes mental health problems;
- Factors associated with domestic violence cause the mental health problems seen in battered women.

Mental Health Problems as a Cause of Domestic Violence

Early research on domestic violence assumed that such an association represented a propensity of mentally ill women to be battered, as if they were responsible for their partners'

violent behavior because they were mentally ill (Symonds, 1979; Wardell, Gillespie, & Leffler, 1983). Research based on this assumption compares mentally ill women who are battered to those who are not, with the result that pathology appears to be a reasonable cause for the abuse simply because other causes were never assessed (Miller, 1991). The prevalence of this perspective among health care professionals has been explained by the just world hypothesis (bad things only happen to bad people), victim blaming (rather than blaming social conditions, which are more difficult to change), and labeling (as a way to distance oneself from the victim) (Campbell, 1991).

On the basis of a literature review explicitly designed to test the assumption that mentally ill women will be battered, Hotaling and Sugarman (1986) found that women's behaviors, attitudes, demographic characteristics, and personality traits were unrelated to whether they were battered by a male partner. They noted,

the psychiatric model assumes that certain internal and stable traits predispose the individual toward violent victimization. The major assumption of this model is that the locus of causation for individual response is internal and is the result of inherited factors or past learning contingencies. Available evidence does not support the psychiatric perspective. (p. 118).

They concluded that "personality and symptomological differences are a consequence of battering rather than a cause of it" (p. 118).

Domestic Violence as a Cause of Mental Health Problems

More recent researchers are more likely to assume explicitly that battering causes mental health problems (e.g., Campbell, 1991). Many have offered eloquent and convincing rationales for this interpretation. For example, according to Walker and Browne (1985),

theories of victim precipitation suggest that battered women invite abuse because of some personality deficit in themselves, sometimes labeled as masochism . . . the past decade of research has provided evidence that women who are physically, sexually, or psychologically battered by their mates do not derive enjoyment from their suffering and do not feel a need to be punished or to seek out abusive treatment, as a masochism explanation would propose . . . However, living in constant fear of violent attacks and experiencing physical assault does create sufficient stress to affect women's responses in significant ways. (pp. 179-80)

Some researchers raise the question of whether mental health problems are, in fact, related to domestic violence. Walker (1979) noted that behaviors that seem "crazy" may be

helpful in surviving chronic battering, but have been misunderstood as indicating mental illness by medical and mental health care providers. In one study, domestic violence was associated with continuous psychological distress scores, but battered women were no more likely than other women to reach the cutoff score indicating a problem of clinical severity (Wayland, Roth, & Lochman, 1991). The researchers concluded that domestic violence was associated with distress, but not mental disorder.

This perspective highlights the relevance of the diagnostic category of posttraumatic stress disorder (PTSD). According to the American Psychiatric Association (1994), “The essential feature of posttraumatic stress disorder is the development of characteristic symptoms following exposure to an extreme traumatic stressor” (p. 424). Researchers studying domestic violence observed that “as a pattern of posttraumatic adjustment, with its accompanying thoughts and feelings, PTSD theoretically can occur in anyone who is placed in a similar situation, thus removing individual pathology or blame” (Woods & Campbell, 1993; cf. Walker & Browne, 1985). The appropriateness of this diagnosis is further supported by similarities between the strategies used by captors of prisoners of war and those used by battering husbands (Browne, 1987; Romero, 1985). Battered women report all the components of psychological torture included in the definition of Amnesty International: isolation, induced debility (via limited food, sleep interruption), obsessiveness/possessiveness, threats, degradation, drug/alcohol administration, altered states of consciousness produced through hypnotic states, occasional indulgence which occurs randomly and helps keep alive hope that the torture will cease (Walker, 1984).

Factors Associated with Domestic Violence That Cause Mental Health Problems

Two sets of factors will be considered:

- Demographic characteristics
- Childhood sexual abuse

Demographic characteristics. Campbell (1991) noted that depression and battering are associated with similar demographic profiles: being female, young, unemployed, and divorced or separated. She suggested that as a result, “it is difficult to make conclusions about whether depression in adult female survivors of family violence stems from abuse or from other factors” (Campbell, 1991, p. 44). An alternative interpretation of the overlap of

the demographic characteristics associated with battering and those associated with depression is that the high levels of depression found among young, divorced or separated women is itself due to the high prevalence of victimization in this group (Cutler & Nolen-Hoeksema, 1991).

Childhood sexual abuse. Childhood sexual abuse may confound associations of battering with mental health problems. There is some evidence that childhood sexual abuse is more common among battered than non-battered women. In uncontrolled studies, 29% to 48% of battered women had been sexually abused during childhood (Bergman & Brismar, 1992; Gleason, 1993; Hilberman & Munson, 1977-78; Walker, 1984). In comparison, rates of childhood sexual abuse in general populations ranged from 5% to 5.1% (Laurmann, Gagnon, Michael, & Michaels, 1994; Siegel, Sorenson, Golding, Burnam, & Stein, 1987; Wilsnack, Vogeltanz, Klassen, & Harris, in press). The one general population study to compare battered and non-battered women's histories of sexual abuse found that 20% of raped or beaten wives had had unwanted intercourse before the age of 14, compared to 6% of other wives, a statistically significant difference (Russell, 1982). A very similar pattern was found in a small study of women psychiatric inpatients, in which 20% of the battered women had been sexually abused by a male relative or stepfather during childhood, compared to 8% of non-battered patients; this difference was not statistically significant but may have suffered from inadequate power (Back, Post, & D'Arcy, 1982).

The association of battering with childhood sexual abuse is of concern in this context because several well-designed studies indicate that childhood sexual abuse is related to later mental health problems (Beitchman, Zucker, Hood, DaCosta, & Akman, 1992; Browne & Finkelhor, 1986; Peters, 1988; Stein, Golding, Siegel, Burnam, & Sorenson, 1988). This suggests the possibility that the mental health problems of battered women may be attributable to their childhood abuse, rather than their current or recent battering. One study tested this hypothesis specifically and found that controlling for childhood victimization (undefined) did not attenuate associations of physical assault by a male partner with psychological distress level (Wayland et al., 1991). In another study, childhood sexual or physical abuse appeared to account at least partly for the increased risk of PTSD among battered women using one, but not another, measure of PTSD (Kemp, Green, Hovanitz, & Rawlings, 1995).

PREVALENCE OF MENTAL HEALTH PROBLEMS AMONG BATTERED AND NON-BATTERED WOMEN

Mental Disorders

We review the evidence for associations of domestic violence with four mental health problems:

- depression;
- suicide ideation and attempts;
- substance abuse;
- PTSD.

We were unable to locate literature on the association of domestic violence with anxiety disorders other than PTSD, although based on descriptions of the anxiety-evoking nature of domestic violence, we would expect that battered women might be at increased risk for anxiety disorders.

Prevalence rates among battered women are compared to general population rates for each disorder. Of course, general population rates are biased upward because approximately 8% to 12% of women contributing to them have themselves been battered within the past year (Plichta & Weisman, 1995; Ratner, 1993; Straus, 1990, 1991).

Depression. Depressive disorders include major depressive disorder and dysthymic disorder (American Psychiatric Association, 1994). Both of these disorders include symptoms such as depressed mood, decreased interest or pleasure in usual activities, significant weight or appetite change when not trying to lose weight, insomnia or oversleeping, excessive motor activity or slowness, fatigue, feelings of worthlessness, excessive or inappropriate guilt, difficulty in concentrating or making decisions, recurrent thoughts of death, suicidal thoughts, or suicide attempts.

Depression has been considered a theoretically important potential consequence of battering. Walker (1979) hypothesized that battered women experience learned helplessness, a condition in which organisms learn that outcomes are unrelated to their behavior (Seligman, 1975). As a consequence, they cease trying to change their fate. Seligman (1975) likened learned helplessness in animal (and later, human) experiments to depression in humans, particularly with regard to motivational impairment and pessimistic expectations. Walker

(1979) noted that “battered women’s behavior appears similar to Seligman’s dogs, rats, and people” (p. 48).

Table I summarizes research on the association of battering with depression, and *Figure I* summarizes prevalence rates found in previous studies. The prevalence of depression among battered women varied widely across studies, with rates of 15% to 83%. Rates varied by measurement method.

- The lowest rates (15% to 36.7%) tended to be found by clinical examination (Back et al., 1982; Hilberman & Munson, 1977-78; West, Fernandez, Hillard, Schoof, & Parks, 1990), although there were exceptions (Khan, Welch, & Zillmer, 1993; Rounsaville & Weissman, 1977-78).
- The highest rates (69.9% to 83%) tended to be found in studies using symptom checklists (Campbell, Sullivan, & Davidson, 1995; Cascardi & O’Leary, 1992; McCauley et al., 1995; Rounsaville & Weissman, 1977-78), although there was one exception (Gleason, 1993).

Sample size was also related to results. This was not surprising because smaller studies tended to use clinical assessment whereas larger studies tended to use checklist measures.

- All of the studies finding the lowest rates (15% to 37%) were from small samples, ranging from 30 to 60. However, a similar rate (38%) was found in a very large study (N = 3,002; Gelles & Harrop, 1989).
- The studies finding the highest rates (61% to 83%) include two of the three largest samples (Campbell et al., 1995; N = 141; McCauley et al., 1995; N = 1,826).

A few general population studies have addressed the association of battering with depression:

- The one United States general population study we identified that provided a depression prevalence rate was in the midrange of reported rates (38%; Gelles & Harrop, 1989); however, its measure of depression was quite limited.
- A second United States general population study was conducted, but results were not reported in a way that allows estimation of the prevalence of

depression among battered women, although results indicated an association between battering and depression (Plichta & Weisman, 1995).

- A Canadian general population survey found a mean of 4.6 on the General Health Questionnaire depression scale among battered women, compared to 1.4 for non-abused women (Ratner, 1993). A limitation of this result for the present purposes is that it does not translate readily into a percentage of battered women who need mental health care for depression.
- The only other sample that roughly approximated a general population was that of McCauley et al. (1995), who surveyed patients of four primary care internal medicine practices, regardless of the reason for their visit. In this study, 69.9% of recently battered women were in the highest tertile of a self-administered depression scale.

Even the lowest depression rates found among battered women are much higher than those typically found in general population surveys of women, which find a lifetime prevalence rate of 10.2% (Weissman, Bruce, Leaf, Florio, & Holzer, 1991) to 21.3% (Kessler et al., 1994). When battered women were compared explicitly to non-battered women, the prevalence of depression was higher among the former (Back et al., 1982; Gelles & Harrop, 1989; Jaffe, Wolfe, Wilson, & Zak, 1986; K  rouac, Taggart, Lescop, & Fortin, 1986; McCauley et al., 1995; Ratner, 1993).

Suicidality. Studies of suicide ideation and attempts found prevalence rates ranging from 4.6% to 77% (see **Table 2** and Figure 2). These compare to rates of 0.8% to 15.9% (ideation) and 0.1% to 4.3% (attempts) in general populations (Moscicki, 1989). One study found a 4.2% lifetime prevalence of suicide attempts among women (Mo  cicki et al., 1988) and others found that being female was a risk factor for both ideation and attempts (Moscicki, 1989), but like high depression rates in women, this may itself be influenced by high rates of domestic violence among women.

Rates among battered women varied by sampling frame.

- The one general population study found the lowest rate of suicidal thoughts (4.6%; Gelles & Harrop, 1989).
- In a large sample of primary care patients, 21.5% of recently battered women

reported previous suicide attempts (McCauley et al., 1995). Rates in emergency room samples ranged from 8.2% to 29% (Bergman & Brismar, 1991; Bergman, Larsson, Brismar, & Klang, 1987; Berrios & Grady, 1991; Rounsaville & Weissman, 1977-78; Stark, Flitcraft, & Frazier, 1979).

- The highest rates (37.5% to 77%) were found among psychiatric patients (Back et al., 1982; Carmen, Rieker, & Mills, 1984; Gondolf, 1990).

Findings of differences between battered and non-battered women also varied by setting. Studies in psychiatric populations tended not to find differences (Back et al., 1982; Carmen et al., 1984; Gondolf, 1990), whereas studies in other settings always found a higher prevalence of suicidality among battered women than controls (Bergman & Brismar, 1991; Gelles & Harrop, 1989; McCauley et al., 1995; Stark et al., 1981, cited in Stark & Flitcraft, 1991; Stark et al., 1979). The high rates of suicidality and lack of differences between battered and non-battered women in psychiatric settings are not surprising, because high rates would be expected throughout these populations.

Substance abuse. Substance use disorders include substance abuse and substance dependence. Substance abuse refers to “a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances” (American Psychiatric Association, 1994, p. 182). In substance dependence, the person displays “a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern of repeated self-administration that usually results in tolerance, withdrawal, and compulsive drug-taking behavior” (American Psychiatric Association, 1994, p. 176). In the *Diagnostic and Statistical Manual* of the American Psychiatric Association (1994), the term *substance* can refer to a drug of abuse, including alcohol; a medication; or a toxin. The present report is restricted to use of drugs of abuse, including alcohol. Because different researchers defined this issue differently, we present findings on alcohol abuse or dependence, drug abuse or dependence (i.e. drugs of abuse other than alcohol), and general substance abuse or dependence (any drug of abuse, including alcohol).

Table 3 summarizes studies of substance abuse among battered women. Figures 3 and 4 summarize prevalence rates found in previous studies. Rates were as follows, with

comparisons to surveys of women in the general population:

- Alcohol abuse and dependence: 15% to 29% (with one higher and one lower exception), compared to lifetime prevalence rates of 4.6% (Helzer, Burnam, & McEvoy, 1991) and 8.2% (Kessler et al., 1994) in general populations.
- Drug abuse and dependence: 7% to 25%, compared to lifetime prevalence rates of 4.8% (Anthony & Helzer, 1991) and 5.9% (Kessler et al., 1994) in general populations.
- Substance abuse: 22.8% to 29%, compared to 17.9% in the general population (Kessler et al., 1994).

In some samples, battered and non-battered women were similar in their prevalence of substance abuse or dependence (Appleton, 1980; Back et al., 1982; Carmen et al., 1984), whereas in others, substance abuse or dependence was more common among battered women than controls (Herman, 1986; Ratner, 1993; Stark et al., 1981, cited in Stark and Flitcraft, 1991; Stark et al., 1979).

Posttraumatic Stress Disorder (PTSD). Symptoms of PTSD include intense fear, helplessness, or horror; reexperiencing of the traumatic event; avoidance of situations associated with the trauma and numbing of responsiveness in general; and anxiety symptoms such as insomnia, difficulty concentrating, or exaggerated startle response (American Psychiatric Association, 1994). Clinicians and researchers who had contact with battered women observed that reactions of battered women resembled those of other people experiencing trauma, e.g. natural disasters (e.g. Symonds, 1979). These observations, along with the considerations mentioned earlier, suggested that the diagnosis of PTSD might be appropriate to describe the difficulties experienced by many battered women.

Systematic research (a subset of the studies shown in **Table 4**; prevalence rates summarized in Figure 5) indicated that 31% to 84.4% of battered women met criteria for PTSD. This research was conducted entirely with women seeking help for domestic violence, who either resided in shelters or sought help from shelters or therapists while living at home. Sample sizes were typically small, ranging from 26 to 179; 8 of the 10 samples consisted of fewer than 100 women. Prevalence tended to be high in the two largest samples (Kemp et al., 1995; N = 179, **84.4%**; Saunders, 1994; N = 159, 60%). There were no clear

relationships of measurement methods to prevalence.

PTSD prevalence in battered women was never compared to prevalence in women who were not battered but otherwise similar, probably because the diagnostic criteria require a stressful event. One study used a group of non-battered women who had been verbally abused by male partners for comparison; rates of PTSD were 81% among battered women and 62.5% among verbally abused women using one measure, and 43% and 20.8% using another measure -- suggesting high prevalence rates in both groups, although higher among the battered women on one of the two measures of PTSD used (Kemp et al., 1995).

Lifetime prevalence rates of PTSD in general populations of women have been estimated at 1.3% to 12.3% (Breslau, Davis, Andreski, & Peterson, 1991; Davidson, Hughes, Blazer, & George, 1991; Helzer, Robins, & McEvoy, 1987; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Norris, 1992; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993; Shore, Vollmer, & Tatum, 1989), including 9.4% of those without a history of crime victimization and 25.8% of those with such a history (Resnick et al., 1993). These are much lower than the rates for battered women shown in **Table 4**. When general population studies evaluated the risk of PTSD for persons exposed to specific types of stress, risks were particularly high for rape (Breslau et al., 1991; Kessler et al., 1995; Norris, 1992), which is relatively common among battered women (Frieze, 1983; Pagelow, 1988; Russell, 1982; see below). Suicide attempts were more common among persons in the general population with PTSD than among those without (Davidson et al., 1991), suggesting that excess suicide attempt rates among battered women (reviewed above) may be attributable, at least in part, to PTSD.

Limitations in Physical Functioning

Functioning refers to the capacity to perform tasks and activities (Wells et al., 1989). Functional limitations are not a mental health problem in and of themselves, although functional limitation is one criterion for mental disorders (American Psychiatric Association, 1994); limitations in functioning can be secondary to both physical and mental health problems (Stewart et al., 1989; Wells, Golding, & Burnam, 1988; Wells et al., 1989). Although they are not a mental disorder per se, they are an important potential behavioral outcome of domestic violence that is related to economic costs because of its relationship to

productivity and health service use (Cluff, 1981; Stewart et al., 1989; Wells et al., 1989).

Battered women typically show limitations in physical functioning compared to non-battered women. A common measure of physical functioning is days spent in bed (Wilder, 1983). In a national general population survey that identified 349 battered women, 18.3% had spent at least one day in bed because of illness in the month before the interview; bed days were significantly more prevalent than in non-abused women (12.5%; Stets & Straus, 1990). In a general population survey of 6,024 women living in two United States regions, women sexually abused by their husbands at any time in their lives were significantly more likely to report at least one bed day in the previous 3 months (33.5%) than were women sexually abused by others (13.6%), and all sexually abused women (15.1%) were significantly more likely to report bed days than were non-abused women (10.9%; Golding, 1996). These comparisons are likely to underestimate the magnitude of the difference between battered and non-battered women, because most women raped by their husbands are also battered, but many women are battered but not raped by their husbands (Russell, 1982) and would thus be counted in the "not sexually abused" or "sexually abused by others" categories in this study. Although abused women were more likely than non-abused women to be depressed, depression among abused women did not explain the difference in functional status. However, the greater numbers of physical symptoms reported by abused women accounted for the functioning difference between abused and non-abused women.

Battered women show deficits on other measures of physical functioning as well. In a Canadian general population survey, physically abused women had greater social dysfunction than non-abused women (Ratner, 1993). Women sexually abused by their husbands at any time were more likely than women sexually abused by others to have restricted their activities because of their health, and all sexually abused women were more likely to have restricted activity days than non-abused women (Golding, 1996). Again, the latter difference was attributable to the greater numbers of serious physical symptoms suffered by sexually abused women.

Greater severity of battering appears to relate to more severe functional impairment. In one study, whereas 18.3% of all battered women reported at least one bed day, 22.8% of women who had sustained severe violence reported this limitation (Stets & Straus, 1990).

Among employed battered women, 9.3% missed work, compared to 19% of the most severely battered women (Stets & Straus, 1990).

Mental Health Problems of Children Resulting From Violence Against Their Mothers

The mental health consequences of domestic violence are not likely to be limited to impairments in the mental health of battered women. Domestic violence may potentially also directly and/or indirectly affect the mental health of battered women's children. A major direct effect would consist of the mental health consequences of witnessing violence. Children are aware of the violence their fathers commit toward their mothers; in one study, 87% of the 278 mothers reported that children knew about the battering (Walker, 1984), and this may be an underestimate because some children may be aware, but their mothers may not know it. From 68% to 86% of battered women seeking emergency room treatment or residing in shelters reported that at least one of their children had witnessed the violence (Berrios & Grady, 1991; Bergman, Larsson, Brismar, & Klang, 1988; K  rouac et al., 1986).

Walker (1979) refers to "the psychological scars they [children] bear from watching their fathers beat their mothers" (p. 149). She notes, "Imagine trying to concentrate on schoolwork while wondering whether your mother would be alive when you got home that day" (p. 150). From a theoretical perspective, DSM-IV (American Psychiatric Association, 1994) lists witnessing violence as a stressful event that could potentially precipitate PTSD. Because battering is typically repeated, it can be seen as a chronic strain; chronic strains contribute to depression in children over- and above their effects on their mothers' depression (Hammen et al., 1987).

Men who abuse their wives often also abuse their children; this represents a second type of direct effect of battering on children. Approximately half the men who battered their wives also abused their children (Roy, 1977; Walker, 1984). Although children who are themselves abused may be at higher risk than those who witness, but do not directly experience violence (Davis & Carlson, 1987), the potential effects of witnessing violence and the indirect effects on children (see below) may occur over and above the child's increased risk for being abused himself or herself.

Indirect effects of domestic violence on children's mental health are also possible. To the extent that battered women are at relatively high risk for mental health problems and/or

functional limitations, any resulting impairment could hypothetically affect their capacity to care for their children (Wolfe, Jaffe, Wilson, & Zak, 1985). For example, there is good evidence that the children of depressed mothers are at increased risk for more, and more chronic, adjustment problems than children of bipolar, medically ill, or healthy mothers (Anderson & Hammen, 1993). Battered women are also at increased risk of abusing their children, although this risk decreases dramatically when the women are safe from violence (Walker, 1984). This should in no way be taken to imply a criticism of battered women's adequacy as mothers. Each person's parental adequacy must be assessed at the individual level. In the case of battered women, this assessment must take place when the woman is in a safe environment, giving findings that their distress decreases markedly when its source -- battering -- is removed (Campbell et al., 1995; Walker, 1984; Walker & Browne, 1985).

Children of battered women are described as suffering from severe learning problems, and as impulsive, **unruly**, and aggressive toward other children (Walker, 1979). In two studies, about one-third displayed some mental health problem (Bergman et al., 1988; Hilberman & Munson, 1977-78).

Several more systematic studies have been reported. In a study of 34 preschool and 32 school-age children of shelter residents, 70% were in the clinical range of the Child Behavior Checklist on behavior problems, and 53% were in the clinical range on depression (Davis & Carlson, 1987). Semi-structured interviews of 130 children of shelter residents found that nervousness (52%), sadness (48%), unhappiness (28%), withdrawal (15%), and aggressiveness (13%) were common, as were strained relationships (40%), slowness in learning (25%), and disrespect for discipline (16%) (K  rouac et al., 1986). In contrast, a study of 65 children in shelters found that on the average, they were within the normal range on behavior checklists, although the preschoolers were well below average in self-esteem (Hughes & Barad, 1983).

One of the few studies to use a control group found that children from violent families were more likely than those from non-violent families to fall into the high range and the clinical range on the Achenbach Child Behavior Profile (Wolfe et al., 1985). Another study compared controls (non-abused children in non-violent families) with children who witnessed spousal violence, those who were abused themselves, and those who were both abused and

witnessed spousal violence (Sternberg et al., 1993). Children in all the abuse groups reported more depression than the controls, and those who witnessed spousal battering (regardless of whether they were abused themselves) reported more behavior problems on the Youth Self-Report and were reported by their mothers to have more behavior problems on the Child Behavior Checklist (Sternberg et al., 1993).

Physical health problems are also common among children of battered women. These have obvious costs to the health care system. One research team reports that in 209 children of 60 battered women, “psychosomatic illness and symptoms were prominent . . . and included headaches, abdominal complaints, asthma, peptic ulcer, rheumatoid arthritis, stuttering, and enuresis. (Hilberman & Munson, 1977-78), p. 463). A more systematic study found that 18-20% of school-age children, 20% of preschool girls, and 42% of preschool boys were in the clinical range on somatization (multiple, unexplained physical complaints) as measured by the Child Behavior Checklist (Davis & Carlson, 1987). In another study, 9.9% of children of battered women had poor or fair general health, compared to 4.4% of children in the general population, and were much more likely to have hearing and sight problems (K  rouac et al., 1986). One could speculate that these problems might be due to having been themselves beaten about the head. Mean number of lost school days was double that of the general population.

A limitation of most studies of children of battered women is that they have been conducted in shelters. Whereas this is clearly a cost-effective way to recruit the population of interest, it may misrepresent this population because of the stress of moving to a shelter (or of living in unfamiliar surroundings) in itself. This problem is a special case of the problem that stresses other than witnessing violence may confound assessment of the relationship between witnessing violence and mental health problems (Sternberg et al., 1993). In one study, behavioral differences between children from violent families and those from non-violent families was attributable to the greater stress reported in the violent families (Wolfe et al., 1985).

Another limitation is in the ages of the children studied. Ages are frequently not measured, and when they are mentioned, they are usually limited to children under about 13. Thus, the extent of mental health consequences for adolescents -- who may have witnessed

battering for many years, and who are at a life stage in which they are beginning to establish their own partner relationships -- is virtually unexplored.

We have not been able to identify studies that used standardized diagnostic assessments to evaluate the mental health of children of battered women. The extent of health service use among these children is also unknown.

MENTAL HEALTH COSTS ASSOCIATED WITH DOMESTIC VIOLENCE

The literature cited above indicates that the mental health consequences of domestic violence are significant, but the costs to the health care system is less well documented. The following summarizes the methodology and findings of two studies that document the mental health costs associated with crime victims, including victims of domestic violence:

Miller, Cohen, and Rossman (1993) estimated the lifetime cost of criminal victimization in 1989, including lifetime mental health costs. Costs of domestic violence were not separated in this study. The total lifetime costs amounted to \$178.4 billion, of which \$76.6 billion were mental health costs. The \$76.6 billion were distributed as follows: rape- \$8.3 billion, assault- \$52.9 billion, robbery- \$15.3 billion, and arson- \$.1 billion. These cost estimates include the following three categories of costs: (a) direct costs, (b) productivity losses-- wage, fringe benefits, and housework, and (c) nonmonetary losses-- pain, suffering, and lost quality of life. Nonmonetary costs of pain and suffering are based on willingness-to-pay estimates and jury compensation. Quality-adjusted life-years lost are estimated using previously developed methods, then multiplied times a value per life year lost.

Cohen and Miller (1994) reported the results of a pilot survey of 168 mental health professionals to determine: (a) the number of crime victims receiving mental health counseling, by type of crime, and (b) the annual cost of treatment for each type of crime, number of victims served, and the total costs incurred in the calendar year 1991, regardless of when the victimization actually occurred--a prevalence-based approach.

Telephone interviews were conducted of random samples of members of eight selected professional organizations: the American Psychiatric Association, American Psychological Association, National Association of Social Workers, American Association of Marriage & Family Therapy, American Association of Pastoral Counselors, American Mental Health Counselors Association, American Family Therapy Association, and American Society of

Group Psychotherapy and Psychodrama.

Results of the survey are:

- An estimated 3.1 to 4.7 million crime victims received mental health care in 1991. Assault, including domestic violence, was measured, along with other types of crime (rape, robbery, burglary, kidnapping, arson, drunk driving, and other).
- The total value of counseling/treatment received amounted to an estimated \$8.3 - \$9.7 billion in 1991. Since only 70% of normal fees are actually paid, actual expenditures are estimated to be between \$5.8 and \$6.8 billion.
- Of this total, 353,000 - 412,000 persons were estimated to have suffered assault including domestic violence, amounting to a total value of \$572.7 - \$885.5 million.
- An additional 237,000 - 361,000 were estimated to have been the victims of attempted or completed rape, amounting to a total value of \$511.9 - \$863.0 million.
- Inflating Rice et al.'s (1990) estimates of the direct cost of mental illness to 1991, it is estimated that more than 12% - 14% of the total mental health care costs in the United States are for crime-related counseling.

The authors discuss the following limitations of their survey:

- A telephone survey is probably not the ideal method to gather accurate data on the number of crime victims served and the length of treatment. Other approaches were considered, but were eliminated for various reasons.
- Potential bias of the sample- The organizations sampled do not represent 100% of all the mental health professionals who might treat victims of crime and therefore are non-representative of all professionals. In addition, it is possible that those who ultimately responded to the survey are not representative of the sample population.

Additional limitations include:

- Given the above limitations, it is not clear how the numbers were inflated to the totals.
- The study does not address unmet need for mental health care.

Miller, Cohen. and Wiersema (1995) also estimated the mental health care costs per criminal victimization in 1993 as follows: Fatal crime--\$4,800, child abuse--\$2,500, rape and sexual assault--\$2,200, other assault--\$76, robbery--\$66, drunk driving--\$82, arson--\$18, larceny--\$6, burglary--\$5, and motor vehicle theft--\$5. These estimates are based on the authors' pilot study of 168 mental health care professions, described above.

Another approach to estimating the mental health care costs associated with domestic violence is to estimate the total costs of mental health care and to apply an estimated proportion of the total that might be associated with domestic violence based on smaller studies. Rice estimated the direct mental health care costs at \$42.5 billion in 1985, including care provided in mental health specialty and Federal institutions, short-stay hospitals, and nursing homes; other treatment costs- office based physicians, other professional services and drugs; and support costs (Rice, Kelman, Miller, & Dunmeyer, 1990). The costs of mental illness were updated to 1990 employing economic data and indices. The estimated direct costs of all mental illnesses for 1990 amounted to \$67 billion in 1990 (Rice & Miller, 1995). These mental illness costs have been disaggregated to estimate amounts spent for care of persons with various types of mental disorders, such as affective disorders (Rice & Miller, 1995), schizophrenia-(Rice & Miller, in press), anxiety disorders (DuPont et al., in press), obsessive compulsive disorder (DuPont, Rice, Shiraki, & Rowland, 1995), severe mental illness (National Advisory Mental Health Council, 1993). However, the direct costs of mental health care for care of victims of domestic violence have not been estimated.

METHODOLOGIC ISSUES

Estimation of the economic costs of domestic violence attributable to mental health problems and their sequelae must ultimately be based on accurate estimates of the prevalence of mental health problems among battered women. This requires

- adequate sampling;
- clear definition and accurate measurement of domestic violence;
- accurate measurement of mental health problems;
- attention to specific issues complicating understanding of the mental health consequences of domestic violence.

Sampling

The use of general population surveys is particularly important given the observation that the prevalence of at least one very serious mental health problem of battered women, suicidality, varies with the setting in which it is estimated. A minimal requirement for estimating which mental health problems are attributable to domestic violence (compared to those that occur in the general population for other reasons), is estimation of prevalence rates in otherwise comparable non-battered women. Comparability must be carefully defined using information from the highest-quality research in psychiatric epidemiology.

Response rates are of particular concern in survey research on domestic violence. Survey research excludes persons not at home when interviewers call and women who are not willing to answer the telephone or come to the door for strangers (Browne, 1993; Koss et al., 1994). It is reasonable to speculate that abused women may be more fearful of attacks by strangers, or, more likely, may be prevented by controlling, abusive partners from talking with interviewers. National surveys also typically exclude those who do not speak English fluently, the very poor, military families living on base, people with particularly chaotic lives, and homeless, hospitalized, institutionalized, or incarcerated persons (Browne, 1993; Koss et al., 1994).

Underreporting can also result when others are present at the time of the interview (Koss et al., 1994), particularly the abusing partner who is frequently controlling.

A few general population surveys of domestic violence and some of its potential mental health consequences have been conducted (Gelles & Harrop, 1989; Plichta & Weisman, 1995; Ratner, 1993). These studies have limitations for evaluating the prevalence of mental health problems among battered and non-battered women; for example, in measurement (Gelles & Harrop, 1989; Ratner, 1993) and reporting of prevalence rates (Plichta & Weisman, 1995).

Measurement of Domestic Violence

Although the Conflict Tactics Scale (CTS; Straus, 1990) has been widely used in this literature to identify battered women, some studies used medical chart reviews, unspecified measures, or defined battering by a woman's appearance at a battered women's shelter. Medical chart reviews and appearance at battered women's shelters are likely to miss many

battered women because health care providers often do not ask about domestic violence (Friedman, Samet, Roberts, Hudlin, & Hans, 1992; Stark et al., 1979) and not all battered women utilize shelters. Of course, the reliability and validity of unspecified measures cannot be assessed.

Adequate reliability and validity have been demonstrated for the CTS (Gelles, 1990; Straus, 1990), and it has proved useful in documenting the remarkably high prevalence of domestic violence in the United States (Murphy & Cascardi, 1993; Straus, 1990). However, the CTS has been criticized for several reasons:

- instructions to respondents frame the issue in terms of conflict management;
- its list of violent acts is not exhaustive (a notable omission is sexual assault);
- the objective or behavioral quality of the items does not provide information about the intentions or the effects of violence.

Supplementary information might enhance the usefulness of the CTS (Browne, 1993; Gelles, 1990; Murphy & Cascardi, 1993; Straus, 1990). Such information could include

- size and strength of the batterer and victim,
- occurrence and severity of injuries,
- the context in which the violence occurred, such as whether the behavior was motivated by self-defense.

Definition of Domestic Violence

Defining domestic violence raises issues of the definitions of both violent behaviors and partners (Gelles, 1990; Stark & Flitcraft, 1991). Domestic violence is defined here as involving physical force (Koss et al., 1994), a physical act (Gelles, 1990), or intent to cause physical pain (Straus, 1991). This does not include psychologically abusive behaviors. However, physically abused women are typically also psychologically abused by their batterers (Ratner, 1993; Walker, 1984); psychologically abusive behaviors include isolation, obsessiveness/possessiveness, threats, degradation, and so forth (see above). It would be reasonable to hypothesize that these behaviors account, in part, for the mental health problems reported by battered women.

To the extent that the definition of domestic violence is restricted to physical assault, different types of assaultive behaviors should be considered. One form of assault that has

received attention in the literature is marital rape. Marital rape is thought to be frequent in the general population; Russell (1982) found that 14% of the 644 ever-married women in a sample of 930 randomly-selected community residents had been raped by their husbands or ex-husbands. Battered women are at particularly high risk of rape by their male partners. In Russell's study, 46% of the 138 battered wives had been raped by their husbands, compared to 5% of the 482 non-battered wives (Russell, 1982). Likewise, Frieze (1983) found that 43% of 137 battered women reported that their husband forced them to have sex, compared to 2% of 97 comparison women who had not been battered and lived in the same communities. Pagelow (1988) cites a range of 33% to 50% of battered women as being raped by their male partners. She suggests that many of these counts are underestimates because women who deny rape or sexual assault state that they submit to sex against their will because of fear, e.g. of beatings. Most women who are raped by their husbands are raped by them more than once; rates of multiple rapes by a husband range from 59% to 83% of women raped by their husbands (Pagelow, 1988). For example, Russell (1982) found that 69% of wife rapes occurred multiple times; in nearly half these cases (31% of all wife rapes) wife rape occurred more than 20 times.

Raped and battered women consistently showed more extreme reactions than battered women who had not been raped (Frieze, 1983), and marital rape was significantly more common among battered women with PTSD than among battered women without PTSD (Kemp et al., 1995). However, in both of these studies, levels of non-sexual violence were higher among raped and battered women than among those battered but not raped. In the one study that controlled severity of non-sexual violence, women raped by their husbands had lower self-esteem, but associations of rape with depression, use of alcohol to cope with depression, and disclosure of non-sexual violence disappeared, suggesting that the latter associations were attributable to the greater non-sexual violence suffered by women who were also raped (Shields & Hanneke, 1983). Likewise, in another study, sexual assault by a husband did not affect psychological distress levels over and above the effect of physical assault by him (Wayland et al., 1991).

In addition to consideration of the scope of violent behaviors, it is also necessary to consider the definition of partners. Because health care providers are concerned with future

health risks (which are probably the most relevant indicator of total health costs) (Stark & Flitcraft, 1991), partners should be defined to include current or former husbands, unmarried domestic partners, and other intimate partners.

Measurement of Mental Health Problems

Mental health problems must be measured reliably and validly to obtain estimates of the economic costs of battering that are attributable to mental health problems. This is particularly important because prevalence rates of mental health problems often vary depending on the measurement method.

Measurement of depression will serve as an example. To the extent that depression diagnoses are preferred, one practical alternative for large-scale research is the Diagnostic Interview Schedule (DIS; Robins, Helzer, Croughan, & Ratcliff, 1981), which provides reasonably reliable and valid estimates of depression diagnoses (Burke, 1986). Another is the Composite International Diagnostic Interview (CIDI; Wittchen et al., 1991), which also has good reliability and validity (reviewed by Kessler et al., 1994). A briefer measure was proposed by Burnam and colleagues (1988); this measure includes items from the DIS and CES-D, and shows high sensitivity and good positive predictive value in screening for major depression and dysthymia. It may be possible to modify such measures to include both diagnosable depression and sub-clinical depression that represents need for care or other economic costs. Reliability and validity of measures of other mental health problems should be considered in a similar manner.

Additional Issues

Additional issues to be considered include

- time sequencing;
- timing of measurement;
- confounding variables;
- comorbidity

Time sequencing. A limitation of previous research is its ability to assess whether the mental health correlates of domestic violence are, in fact, its consequences. A minimal standard for this would be to assess whether the onset of the mental health problem occurred before or after the onset of battering; i.e., the time sequencing of battering and mental health

problems. This would allow researchers and policy makers to rule out as consequences any mental health problems that appeared before the onset of battering, because conceptualizing these as consequences of battering would be inconsistent with the actual passage of time. According to Stark and Flitcraft (1991) “the disproportionate risk of these problems among battered women appears primarily after the onset of abuse, which suggests that battering is the cause” (p. 127). The observation that these problems tend to remit following the cessation of violence (Campbell et al., 1995; Walker & Browne, 1985) is also consistent with this interpretation.

However, even the time sequence criterion is not entirely unambiguous, because experiences which appear to increase risk for domestic violence (e.g. childhood sexual abuse) may also increase risk for some of the same mental health problems. Also, by itself, this criterion may underestimate the mental health consequences of battering because it does not rule out the possibility that pre-existing mental health problems may be exacerbated directly by battering; that they can be exacerbated indirectly by battering husbands who interfere with treatment; or that battering may precipitate new episodes of pre-existing disorders (e.g. new depressive episodes).

Timing of measurement. Another issue in interpretation of prevalence rates of mental health problems is timing of measurement. For example, Campbell and colleagues (1995) found one of the highest rates of depression in all the literature we reviewed when participants had just left a battered women’s shelter (83% using CES-D criteria); however, over a six-month follow-up, rates declined slightly for women who had been recently battered at the time of the follow-up (to 71%) and substantially for those who had not (49%). Likewise, in another study, length of time out of the battering relationship was associated with reduced PTSD symptomatology in another study (Kemp et al., 1995).

This result is consistent with Walker and Browne’s (1985) contention that the apparent mental health problems seen in battered women decrease markedly when the source of stress -- battering -- is removed. This phenomenon is thought to support the conceptualization of such problems as manifestations of PTSD. Campbell et al.’s 1995 findings -- along with others’ findings of elevated depression rates in women who had been battered at any time in the past -- are also consistent with Walker and Browne’s (1985) observation that the apparent

mental health consequences of battering can be long-lasting. These considerations suggest that estimation of the economic costs of domestic violence attributable to depression and its sequelae should take into account time since the violence occurred and the woman's living arrangements; i.e., living with the batterer and still being battered; not living with the batterer but still being actively threatened by him; or living in a safe environment.

Confounding variables. Several confounding variables may complicate the assessment of mental health consequences of domestic violence. One set of these is demographic characteristics. As noted earlier, demographic profiles of depressed and battered persons are similar. Thus, it would be useful to stratify results to evaluate whether battering increases risk for depression (or other mental health problems) in age, employment, and marital status subgroups. An even more informative alternative would be to conduct regression analyses in which battering is used to predict depression, controlling demographic characteristics; and to test interactions of battering with each demographic characteristic in the model. If the main effect of battering were significant, and interactions were not significant, it would be appropriate to conclude that battering has a similar association with depression in demographic subgroups.

It has been hypothesized that childhood abuse (physical or sexual) might affect women's **response** to domestic violence, rather than their **risk** of experiencing it (Walker and Browne, 1985). It is thought that these experiences might lead to an assumption that victimization is part of what it means to be female, and might provide early training in helplessness that increases feelings of helplessness in response to battering (Walker & Browne, 1985). This hypothesis could be tested explicitly. For example, a regression model in which battering, child abuse, and their interactions serve as predictors of mental health problems could be estimated. An interaction of battering with child abuse in which battering increases risk of mental health problems more for women abused as children than for women not abused as children, would support this hypothesis.

Comorbidity. A fourth issue to be considered is comorbidity. To evaluate economic costs of the mental health consequences of domestic violence, it is necessary to assess all potential mental health consequences of domestic violence (including anxiety disorders other than PTSD) comprehensively within the same women for at least two reasons. Most studies

evaluated the prevalence of depression, suicidality, or substance abuse without assessing comorbidity; however, other research suggests a high degree of comorbidity of PTSD with depression and substance abuse (e.g., Helzer et al., 1987; Kessler et al., 1995). Thus, the first reason is that survey-derived associations of domestic violence with other mental disorders (e.g. depression) may, clinically, represent associations with unmeasured PTSD (for which depression is a rough marker).

Second, although it could be argued that knowing rates of depression, PTSD, substance use, and so forth would provide useful information about costs of treatment and related costs (e.g. costs for children of impaired mothers; see below), it is also possible that the presence of multiple disorders may itself affect costs. For example, PTSD with comorbid depression may remit more slowly than PTSD without other disorders, and thus require longer treatment that is more costly. Alternatively, PTSD with comorbid depression might require different (more or less costly) treatments than either disorder alone. We could identify no estimates in the literature of comorbid conditions among battered women. However, there is evidence that many mental disorders exist in combination (Kessler et al., 1994; Robins, Locke, & Regier, 1991) and, specifically, that PTSD is associated with increased rates of depression, substance abuse, and anxiety disorders (Helzer et al., 1987; Kessler et al., 1995; Zatzick et al., 1995).

RECOMMENDATIONS

The preceding considerations lead to the following recommendations for research on mental health consequences of domestic violence:

- Researchers should evaluate mental health problems and functional limitations among battered and non-battered women, and mental health problems of the children of battered and non-battered women.
 - Specific mental health problems that should be evaluated include PTSD, other anxiety disorders, depression, suicidality, and substance abuse and dependence.
 - Researchers should evaluate the extent of all limitations in functioning, regardless of their apparent causes, among battered women, and the costs of lost productivity and need for treatment associated with these limitations.

- Research on the economic costs of mental health consequences of domestic violence should include comprehensive, developmentally appropriate, reliable, valid estimates of mental health problems in general populations of children of battered and non-battered women. Children of all ages should be assessed, and ideally, followed longitudinally through various developmental stages to detect any possible delayed reactions occurring during developmentally “critical” periods.
- The prevalence of mental health problems and functional limitations should be evaluated in general populations of battered and non-battered women and their children. Sampling frames should include both household and institutional (e.g. shelter, military base) populations.
- Special attention should be given to obtaining interviews from women who might decline to participate because of coercion from partners. Special attention should also be given to interview privacy and to recruitment of women with chaotic life situations.
- Multiple mental health problems should be measured using instruments with demonstrated reliability and validity.
- Dates of onset and duration of domestic violence and mental health problems should be recorded, and time since battering should be taken into account.
- Specific violent behaviors (e.g., marital rape) should be reliably and validly assessed.
- Potential batterers should be defined as current or former husbands, unmarried domestic partners, and other intimate partners.

To estimate the economic costs of the mental health consequences of domestic violence, the following elements are needed:

- accurate data on the prevalence of mental health problems of battered women, functional status of battered women, witnessing domestic violence among children of battered women, and mental health problems among children witnessing domestic violence;
- accurate estimates of use of mental health, hospital (inpatient and emergency

room), medical, and social services for mental health problems by battered women;

- accurate estimates of unmet need for mental health care of battered women;
- accurate estimates of the costs of mental health care in the sectors used by battered women; and
- accurate estimates of lost productivity among battered women, including work productivity, child care, and other activities.

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Table 1
Domestic Violence and Prevalence of Depression

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
Back, Post, & D'Arcy, 1982	30	psychiatric inpatient women 1975-8, with physical abuse by ≥ 1 partner documented on chart	medical chart record	clinical diagnosis (presumably not specially done for the study)	32% of battered women and 17% of age-matched non- battered women were diagnosed with an affective disorder, ns.
	30	age-matched control women patients during same period			
Bergman, Larsson, Brismar, & Klang, 1987	49	women seeking care for battering- related injuries at Huddinge Hospital ER	not specified	Comprehensive Psychopathological Rating Scale	35% of battered women and 6% of controls were depressed ($p < .001$). At one-year follow-up (response rate 45%), one woman was moderately depressed; others had no disorder.
	49	women seeking care for injuries unrelated to battering at same ER			

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
Campbell et al., 1995	141	residents of a domestic violence shelter	modified CTS	CES-D	At shelter exit, 83% were depressed (CES-D ≥ 16). At 6-month follow-up, 43% had been recently battered; of those, 71% were depressed. Of the 57% who had not been recently battered, 49% were depressed.
Campbell, 1989	193	women responding to newspapers ads for those "having serious problems in an intimate or marital relationship" in 2 metro areas (97 battered, 96 non-battered; 24% of battered women were shelter residents)	CTS, or repeated sexual assault by partner as per interview	BDI	battered women (17.5%) were significantly more likely to be in the severely depressed category of BDI (30-63) than non-battered women (8.3%). Mean levels were similar (17.7 in battered women, 15.7 in non-battered women; 16-19 is defined as "mildly to moderately depressed").
Carmen, Rieker, & Mills, 1984	188	discharged psychiatric inpatients (adult and adolescent)	chart review (physical or sexual abuse, regardless of offender, grouped as "abused")	chart review	61% of both abused and non-abused patients were depressed (ns)

Citation	N	Sampling Frame	Measure of Domestic Violence			Measure of Depression	Results
Cascardi & O'Leary, 1992	33	women who sought therapeutic help from a domestic violence agency	C	T	S	BDI	70% scored > 14; 52% scored > 20. Depression was correlated with frequency, severity, and consequences (i.e. injury) of physical aggression (r's range from .40 to .54).
Gellen, Hoffman, Jones, & Stone, 1984	10	women abused by spouse (at residential treatment center for distressed women)	not stated			MMPI D scale	abused women ($\bar{M} = 69.2$, $s.d. = 12.72$) scored significantly higher on D than non-abused women ($\bar{M} = 49.0$, $s.d. = 6.41$), $p < .005$. Profile is consistent with learned helplessness.
	10	non-abused women "picked from the general population" and matched by age, ethnicity, SES, marital status					

		Measure of Domestic V	M	D	Results
Gelles & Harrop, 1989	3002 women in 2nd National Family Violence Survey (1985)	CTS	items from PERI and Perceived Stress Scale		<p>Women with minor (20.6%) or severe (37.6%) violence were more likely than women with no violence (9.0%) to report "bothered by feelings of sadness or depression."</p> <p>Women with severe violence (21.4%) were more likely than women with minor violence (4.1%) or no violence (2.8%) to report feeling "very bad or worthless." Women with minor (8.1%) or severe (20.8%) violence were more likely than women with no violence (2.4%) to report "couldn't help wondering if anything was worthwhile anymore." Women with severe violence (13.3%) were more likely than women with minor violence (3.4%) or no violence (1.3%) to report "felt completely hopeless about everything." Highest level of husband-to-wife violence was correlated with both moderate distress (.20, $p < .001$) and severe distress (.26, $p < .001$).</p>

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
Gleason, 1993	30	battered women living at a Florida shelter	not stated	DIS	battered women in shelter (63%) and at home (81%) were more likely than women from the ECA (7%) to meet criteria for lifetime major depression. Similar results for 1-month and 6-month rates. Battered women living at home (34%), but not those in the shelter (17%), were more likely than ECA women (4%) to meet criteria for dysthymia.
	32	battered women receiving help from the shelter but living at home			
Hilberman & Munson, 1977-78	60	women attending a rural health clinical who were referred for psychiatric evaluation	not stated (unknown to MDs)	not stated	9 women (15%) had "classic depressive illness"
Jaffe, Wolfe, Wilson, & Zak, 1986	56	battered women from shelters	shelter residence + rater assessment on 9 physical aggression items of CTS	GHQ	battered women scored higher on depression ($M = 5.15$, $s.d. = 5.47$) than non-battered women ($M = 1.70$, $s.d. = 2.64$), $p < .001$.
	89	women responding to newspaper ad, who said that they had not been attacked by their partner in the last 12 months			

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
K�rouac, Taggart, Lescop, & Fortin, 1986	130	residents of 8 Montreal area shelters 8-20 days, who were mothers of ≥ 1 child ≤ 12 y.o.	not stated	SCL-90-R	battered women had significantly higher depression score than comparison women ($p < .05$, means not given). They were also more likely to report each depression symptom.
	170	young Quebec women taken from the general population			
Khan, Welch, & Zillmer, 1993	31	women residing at a battered women's shelter	"questionnaire"	MMPI-2	mean D score was not elevated ($M = 61.0$, $s.d. = 14.5$). 32% had scores greater than 65.
McCauley et al., 1995	1826	patients of 4 primary care practices	self-administered survey (Abuse Assessment Screen)	SCL-22	69.9% of women battered within the past year scored in the top tertile of depression, compared to 3 1.9% of non-battered women.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
Mitchell & Hodson, 1983	60	women who had sought assistance from 1 of 6 San Francisco Bay Area shelters	CTS	BSI	means was 2.15, which is 2 s.d. above the norm for non -patient females and close to the mean score for psychiatric inpatients. Frequency and severity of violence were associated with more severe depression.
Plichta & Weisman, 1995	1324	married or cohabiting women 18-65; U.S. nationally representative sample (Women's Health Survey)	CTS	index using 6 CES-D items (Burnam, Wells, Leake, & Landsverk, 1988)	Of the 37.5% of the sample who had "high" depressive symptoms, 16.5% had experienced spouse abuse in the past year; compared to only 3.5% of the 62.5% with low depressive sx.
Ratner, 1993	406	women ≥ 18 y.o. who were currently or within the last year married or cohabiting	CTS	GHQ	Women with physical abuse (M = 4.6, s.d. = 4.6) had significantly higher depression scores than women with no abuse (M=1.4, s.d.=2.4) or psychological (but not physical) abuse (M=2.2, s.d. = 2.9)

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
Rounsaville & Weissman, 1977-78	37	women identified as battered in surgical or psychiatric ER, or at CMHC by routine history taking for all clients, and who attended psychiatric interview (New Haven, CT)	"women who admitted to being physically abused"	CES-D	80% had CES-D ≥ 16 . 53% were diagnosed with depression by clinical interview.
Sato & Heiby, 1992	136	battered women reporting physical victimization by partners during 1987-8, recruited from battered women's groups and shelters	not stated, but sounds like CTS (authors used Straus' norms for violence scores)	Zung Self-Rating Depression Scale	47% depressed according to Zung criteria (score ≥ 50). Mean score was 48, mode was 50.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Depression	Results
Tolman & Bhosley, 1991	53	(contactable) partners of 99 men who completed participation in a shelter-sponsored intervention program for men who batter	modified CTS	20-item psychosocial problem checklist (Hudson, 1982)	64% "felt depressed"
Walker, 1983	403	women assaulted by partners, recruited from mental health referrals, shelters, and media, living in metro Denver (~66%), other Colorado, Montana, S. Dakota, North Dakota, Wyoming, or Utah	women were self-defined as battered	CES-D	CES-D mean score was 18.19 (s.d. = 12.50), compared to means of 9.62 and 9.13 in normative samples
West, Fernandez, Hillard, Schoof, & Parks, 1990	30	women residing in a shelter for homeless abused women	modified CTS	IDD, Hamilton, clinical examination	36.7% had major depressive disorder (per clinical examination)

Notes.

BDI means Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

BSI means Brief Symptom Inventory (Derogatis & Melisaratos, 1983).

CES-D means Center for Epidemiologic Studies Depression scale (Radloff, 1977).

CTS means Conflict Tactics Scale (Straus, 1990).

DIS means Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981).

ECA means Epidemiologic Catchment Area study (Robins & Regier, 1991).

IDD means Inventory to Diagnose Depression (Zimmerman et al., 1986).

Hamilton means the Hamilton Psychiatric Rating Scale for Depression (Hamilton, 1960).

MMPI D means the Depression scale of the Minnesota Multiphasic Depression Inventory

PERI means Psychiatric Epidemiology Research Interview (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980).

SCL-22 means Symptom Checklist-22, a subset of Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) items.

Zung means the Zung Self-Rating Depression Scale (Zung, 1965).

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Table 2
Domestic Violence and Prevalence of Suicidality

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Suicidality	Results
Back, Post, & D' Arcy, 1982	30	psychiatric inpatient women 1975-8, with physical abuse by ≥ 1 partner documented on chart	medical chart record	clinical diagnosis (presumably not specially done for the study)	77% of battered women and 60% of age-matched controls had attempted suicide at least once, ns. Number of attempts also did not differ.
	30	age-matched control women patients during same period			
Berrios & Grady, 1991	218	women who presented to an ER with injuries due to domestic violence	self-report	structured interview on admission	16% had attempted suicide

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Suicidality	Results
Bergman, Larsson, Brismar, & Klang, 1987	49	women seeking care for battering at Huddinge Hospital ER	not specified	item on Comprehensive Psychopathological Rating Scale	battered women reported non-significantly more suicidal thoughts than non-battered women. An unspecified subset of 4 battered women had a history of suicide attempt; none of the non-battered women did.
	49	women seeking care for injuries unrelated to battering at same ER			
Bergman & Brismar, 1991	117	women seeking care for battering at emergency dept of Huddinge Hospital, Stockholm.	not stated	register data and medical records over a 16-year follow-up (the women were not re-contacted).	19% of the battered women (n=22) made ≥ 1 suicide attempt resulting in inpatient care, compared to 1.7% (n=2) in the control group. Two women had made 23 and 18 attempts, respectively; most made 1-2 attempts. Among controls, the 2 women had made 1 attempt each.
	117	Women "selected through the population register" matched by age, nationality, and geographic area in Greater Stockholm			

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Suicidality	Results
Browne, 1987	42	battered women charged with murder	open-ended interview	open-ended interview	48% of the women in the homicide group and 31% in the control group had talked about killing themselves
	205	battered women not charged with murder (subsample of Walker study)			
Carmen, Rieker, & Mills, 1984	188	discharged adult and adolescent psychiatric inpatients	chart review (no distinction in data analysis between physical vs. sexual and spouse vs. other abuse)	chart review	45% of abused patients and 30% of non-abused patients had ≥ 1 suicide attempt ($p < .05$); 44% of abused patients and 42% of non-abused patients were suicidal on admission (ns).
Gelles & Harrop, 1989	3002	women in 2nd National Family Violence Survey (1985)	CTS	PERT	Women with severe violence (4.6%) were more likely than women with minor (0.4%) violence or no violence (0.3%) to report "thought about taking your own life."
Gondolf, 1990	382	patients of ER in psychiatric hospital over 6 months	coding of evaluation interview	staff rating	Of 16 victims of spouse abuse, 6 were rated as highly suicidal by staff. This compares to 9 of 16 victims of abuse by others.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Suicidality	Results
McCauley et al., 1995	1952	women presenting to 4 community-based internal medicine practices	Abuse Assessment Screen (McFarlane et al., 1992)	Women's Health Questionnaire (developed for this study)	women battered in the last year (21.5%) were more likely than other women (5.0%) to have a history of suicide attempts.
Plichta & Weisman, 1995	1324	married or cohabiting women 18-65; U.S. nationally representative sample (Women's Health Survey)	CTS	"had suicidal thoughts in the past year"	21.2% of the sample who reported suicidal thoughts had been abused by their partner in the past year; compared to 7.7% of the 94.3% who had not had suicidal thoughts.
Rounsaville & Weissman, 1977-78	37	women identified as battered in surgical or psychiatric ER, or at CMHC by routine history taking for all clients, and who attended psychiatric interview (New Haven, CT)	"women who admitted to being physically abused"	clinical interview	29% had history of suicide attempt.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Suicidality	Results
Stark & Flitcraft, 1995	176	women who presented at Yale-New Haven ER as attempted suicides	Adult Trauma History Screen (medical record positive, probable, suggestive, reasonable negative)	seeking treatment for suicide attempt	29.5% of women suicide attempters had been battered (22.2% positive, 7.3% probable)
Stark et al., 1981; cited in Stark & Flitcraft, 1991	?	medical population	not stated	not stated	12% of battered women had attempted suicide, compared to 1% of non-battered women.
Stark, Flitcraft, & Frazier, 1979	481	women seeking ER care for injuries over a 1-month period	Adult Trauma History Screen (medical record positive, probable, suggestive, reasonable negative)	medical record	26% of battered women (vs. 3% of non-battered women) had at least 1 suicide attempt. Most of these occurred after the 1st recorded DV incident; before that, rates were 6% and 3%.
West et al., 1990	30	women residing in a shelter for homeless abused women	modified CTS	psychiatric interview	33.3% reported past suicide attempts

Notes.

CTS means Conflict Tactics Scale (Straus, 1990).

PERI means Psychiatric Epidemiology Research Interview (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980).

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Table 3
Domestic Violence and Prevalence of Substance Abuse

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
Appleton, 1980	620	women ER patients 18+ y.o. over 10 weeks, Renton, WA	patient acknowledged having been struck	amount of drinking (measure not specified)	battered and non-battered women were equally likely to be "regular" drinkers (14% of each group)
Back, Post, & D'Arcy, 1982	30	psychiatric inpatient women 1975-8, with physical abuse by ≥ 1 partner documented on chart	medical chart record	clinical diagnosis (presumably not specially done for the study)	Incidence [sic] of substance abuse was comparable in the 2 patient groups.
	30	age-matched control women patients during same period			
Bergman & Brismar, 1992	49	battered women seeking care for their injuries at the surgical ER of Huddinge Hospital, Stockholm	not stated	interviews, supplemented with medical record review	24% were currently dependent on alcohol. 24% had abused cannabis at some time. 14% had abused amphetamine at some time. 7% had abused heroin, cocaine, etc. [sic] at some time.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
Bergman, Larsson, Brismar, & Klang, 1987	49	battered women seeking care for injuries at Huddinge Hospital ER	not specified	CAGE, Ten Question Drinking History	24% of battered women were alcohol dependent, compared to 8% of controls ($p < .05$); 51% of battered women and 28% of controls ($p < .05$) were heavy consumers (> 40 g pure alcohol/day). 16% of battered women and 2% of controls had IV drug addiction ($p < .01$).
	49	women seeking care for injuries unrelated to battering at same ER			
Bergman & Brismar, 1991	117	women seeking care for battering at emergency dept of Huddinge Hospital, Stockholm.	not stated	register data and medical records over a 16-year follow-up (the women were not re-contacted).	"Of the 22 battered women who attempted suicide, 13 (59%) were classified as alcohol or drug abusers in the medical records."
	117	Women "selected through the population register" matched by age, nationality, and geographic area in Greater Stockholm			
Bland & Orn, 1986	2000	randomly-selected adult residents Edmonton, Alberta, Canada	DIS item, "Did you ever hit or throw things at your spouse/partner?"	DIS	N/A (no victims identified)

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
Carmen, Rieker, & Mills, 1984	188	discharged adult and adolescent psychiatric inpatients	chart review (physical or sexual abuse, regardless of offender, grouped as "abused")	chart review	23% of non-abused patients and 24% of abused patients had substance abuse diagnosis on admission (n.s.)
Gleason, 1993	30	battered women living at a Florida shelter	not stated	DIS	battered women in shelter (23%) and at home (44%) were more likely than women from the ECA (4%) to meet criteria for lifetime alcohol abuse or dependence. Similar result for 1-month and 6-month prevalence in community women 25-44 y.o., but 0% of shelter women met 1-month or 6-month criteria. Battered women living at home (25%), but not those in the shelter (10%), were more likely than ECA women (4%) to meet criteria for lifetime drug abuse or dependence. Similar, but non-significant, patterns for 1-month and 6-month rates.
	32	battered women receiving help from the shelter but living at home			

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
Herman, 1986	190	psychiatric outpatients	chart review	chart review	female patients with a history of any victimization were twice as likely to have a substance abuse diagnosis than non-victimized female patients. 4 were alcoholics [i.e. 6.6%]
Hilberman & Munson, 1977-78	60	battered women attending a rural health clinic and referred for psychiatric evaluation	not stated (unknown to MDs)	not stated	
Khan, Welch, & Zillmer, 1993	31	women residing at a battered women's shelter	"questionnaire"	MAC-R from MMPI-2	The mean for this scale was elevated (M = 65.7, s.d. = 13.0). At least 29% are at high risk for alcohol or substance abuse (MAC-R > 28)

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
McCauley et al., 1995	1826	women patients of 4 primary care practices	Abuse Assessment Screen (McFarlane et al., 1992)	CAGE; Women's Health Questionnaire (developed for this study)	5.6% of women battered in the last year scored ≥ 2 on the CAGE, compared to 1.6% of others, $p = .004$; 19.1% of currently battered women had ever had a drinking problem, compared to 6.6% of non-battered women, $p < .001$; 3.7% of battered women now use street drugs, compared to 0.7% of non-battered women, $p < .001$; 38.9% of currently battered women ever used street drugs, compared to 11.4% of non-battered women, $p < .001$; 46.3% of battered women had lifetime street drug use, lifetime drinking problem, or CAGE ≥ 2 , compared to 15.3% of non-battered women, $p < .001$.
Ratner, 1993	406	randomly selected women 18+ who either currently or in the past year were married or cohabiting	CTS	CAGE	16.3% of physically abused wives and 11.3% of psychologically abused wives had alcohol dependence, compared to 2.4% of non-abused wives. Both abused groups differed significantly from the non-abused group.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
Rounsaville & Weissman, 1977-78	37	women identified as battered in surgical or psychiatric ER, or at CMHC by routine history taking for all clients, and who attended psychiatric interview (New Haven, CT)	"women who admitted to being physically abused"	clinical interview	16% were diagnosed as drug abusers. 29% were diagnosed with current alcoholism.
Stark et al., 1981, cited in Stark & Flitcraft, 1991	?	medical population	not stated	not stated	15% of battered women had alcohol abuse, compared to 1% of non-battered women. 9% of battered women had drug abuse, compared to 1% of non-battered women.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of Substance Abuse	Results
Stark, Flitcraft, & Frazier, 1979	481	women seeking emergency room care for injuries over a 1-month period	Adult Trauma History Screen (medical record positive; probable, suggestive, reasonable negative)	medical record	<p>16% of battered women (vs. 1% of non-battered women) had a history of alcohol abuse. This difference also existed before the first assault, when 7% of battered women and 1% of non-battered women had alcohol abuse.</p> <p>7% of battered women and 1% of non-battered women had drug abuse. Most of this began after the first domestic violence incident; before that, 2% of battered women and 1% of non-battered women had drug abuse.</p>
Tolman & Bhosley, 1991	53	(contactable) partners of 99 men who completed participation in a shelter-sponsored intervention program for men who batter	modified CTS	item added to 20-item psychosocial problem checklist (Hudson, 1982)	7% reported "problems with substance use"

Notes.

CAGE means Cutting down, Annoyance by criticism, Guilty feeling, and Eye-openers (Mayfield, McLeod, & Hall, 1974).

CTS means Conflict Tactics Scale (Straus, 1990).

DIS means Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981).

MAC-R means MacAndrew Alcoholism scale (Green, 1991).

MMPI-2 means Minnesota Multiphasic Personality Inventory-2 (Green, 1991).

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Table 4
Domestic Violence and Prevalence of Post-traumatic Stress Disorder

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of PTSD	Results
Astin, Lawrence, & Foy, 1993	53	battered women who were clients of 3 Los Angeles area shelters and one counseling center for battered women	CTS, form N	IES, PTSD Symptom Checklist	55% had PTSD according to Symptom Checklist, 33% had PTSD according to both measures (conservative criterion)
Dutton, Burghardt, Perrin, Chrestman, & Halle, 1994	72	battered women from a specialized family violence outpatient clinic	structured clinical interview	GSI from SCL-90-R, CR-PTSD, MMPI PTSD scale, IES	Cognitive schemata about the violence were associated with all PTSD measures.
Dutton, Hohnacker, Halle, & Burghardt, 1994	30	battered women seeking services from the family violence program of a community mental health agency	ABOC (modified CTS)	GSI from SCL-90, CR-PTSD, MMPI PTSD scale, IES	mean GSI scores were .90 , 1.66; mean CR-PTSD .98 , 1.64; mean IES intrusion 13.55, 27.62; mean IES avoidance 15.17, 24.12; mean PTSD-MMPI 21.88, 27.83. Except for IES, differences disappeared when social support and violence severity were controlled.
	33	battered women awaiting trial for actual or attempted homicide of their abusive partner			

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of PTSD	Results
Dutton & Painter, 1993	75	battered women recruited from transition houses, court-mandated treatment program for their battering partners, and newspaper ads. Women with < 2 incidents of physical violence in the relationship but extreme emotional abuse were classified as Emotionally Abused (n=25).	CTS and PMWI	TSC-33	"Battered women experienced ... high rates of trauma symptoms" but quantitative data are not given.
Gleason, 1993	30	battered women living at a Florida shelter	not stated	DIS, version III-A	battered women in shelter (40%) and at home (31%) were more likely than women from the ECA (1%) to meet criteria for lifetime PTSD.
	32	battered women receiving help from the shelter but living at home			

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of PTSD	Results
Hilberman & Munson, 1977-78	60	battered women attending a rural health clinic and referred for psychiatric evaluation	not stated (unknown to MDs)	not directly measured	“there was a uniform psychological response to the violence which was identical for the entire sample. The women were a study in paralyzing terror which is reminiscent of the rape trauma syndrome.” (p. 464)
Houskamp & Foy, 1991	26	battered women who contacted 2 Los Angeles domestic violence clinics	CTS-R (revised) physical aggression factor, with 3 additional items	SCJD, PTSD Symptom Checklist, IES	43% met Symptom Checklist criteria for PTSD. 45% met SCID criteria. IES was similar. Sensitivity and specificity of Symptom Checklist (relative to SCID) were 70% and 80%; for IES Intrusion, 77% and 78%. Degree of violence and length of time in the violent relationship were positively correlated with SCID diagnosis.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of PTSD	Results
Kemp, Green, Hovanitz, & Rawlings, 1995	179	battered women recruited from shelters, newspaper ads, groups, therapist referrals.	defined as ≥ 18 y.o. has or had a physically abusive heterosexual live-in rlsp. Also used CTS, Form R	Mississippi Scale and PTSD Self-Report Scale	8.1% of battered women (& 62.5% of verbal abuse group) were diagnosed with PTSD according to PTSDSR. 43% of battered women (& 20.8% of verbal abuse group) were diagnosed with PTSD using a cutoff of 107 on the MPTSD (recommended cutoff for Vietnam veterans).
	48	non-battered women w/verbal abuse, recruited from "the community"			
Kemp, Rawlings, & Green, 1991	77	battered women in shelters	physically abusive heterosexual relationship	IES; SCL-90-R, self-report on DSM-III-R criteria, Interview Schedule for PTSD (revised SCID)	84.4% according to self-report on DSM-III-R criteria.
Khan, Welch, & Zillmer, 1993	31	women residing at a battered women's shelter	"questionnaire"	PK and PS scales on MMPI-2	mean of both scales was elevated (for PK, $M = 72.3$, $s.d. = 14.0$; for PS, $M = 70.5$, $s.d. = 15.0$). Approximately 68% scored "high" on these scales.

Citation	N	Sampling Frame	Measure of Domestic Violence	Measure of PTSD	Results
Saunders, 1994	159	battered women who had sought help at domestic violence programs (DVP)	expanded CTS	DIS-PTSD; IES; Posttraumatic Stress Scale for Family Violence (written for this study, based on DSM-III-R criteria)	60% of DVP women and 62% of NDVP women met DIS criteria for PTSD. On the PTSD Scale for Family Violence, mean of DVP group was 4.7 (s.d. = 1.6) and mean of NDVP group was 4.1 (s.d. = 2.0). On IES, DVP had mean 15.2 (s.d. = 10.0) and NDVP had mean 10.1 (s.d. = 10.4).
	33	battered women who had sought other kinds of help (NDVP)			
Wayland, Roth, & Lochman, 1991	542	university students and employees	categories "modeled on" CTS in mailed questionnaire	SCL-90-R GSI (not stated as a measure of PTSD specifically, but of "psychological functioning")	physical assault (by husband, lover, boyfriend, or date) was associated with GSI score in regression model (covariates not specified)
West, Fernandez, Hilland, Schoof, & Parks, 1990	30	residents of a shelter for homeless abused women	modified CTS	SCID PTSD module, clinical examination	46.7% had PTSD (per clinical examination)

Notes.

ABOC means Abusive Behavior Observation Checklist (Dutton, 1992).

CR-PTSD means Crime-Related Post-Traumatic Stress Disorder scale (Saunders et al., 1990).

CTS means Conflict Tactics Scale (Straus, 1990).

DIS means Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981).

DSM-III-R means Diagnostic and Statistical Manual of Mental Disorders, revised (American Psychiatric Association, 1987).

GSI means Global Severity Index of the SCL-90-R (Derogatis, 1983).

IES means Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979).

Mississippi Scale means Mississippi Scale for PTSD (Fairbank, n.d.).

MMPI-2 means Minnesota Multiphasic Personality Inventory-2 (Green, 1991).

MMPI PTSD means the PTSD scale of the Minnesota Multiphasic Personality Inventory (Keane et al., 1984).

PMWI means Psychological Maltreatment of Women Inventory (Tolman, 1989).

PSTD-SR means PTSD Self-Report Scale (Kemp, Rawlings, & Green, 1991)

SCID means Structured Clinical Interview (Spitzer & Williams, 1985).

SCL-90-R means Symptom Checklist 90-Revised (Derogatis, 1983).

Symptom Checklist is from Foy, Sippelle, Rueger, & Carroll, 1984.

TSC-33 means Trauma Symptom Checklist (Briere & Runtz, 1989).

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Figure 1. Prevalence of Depression (%) Among Battered Women in Existing Studies

Note. “General population” refers to prevalence rates among women in general populations.
“General population (battered)” refers to prevalence rates among battered women from general population samples.

Prevalence of Depression (%) Among Battered Women

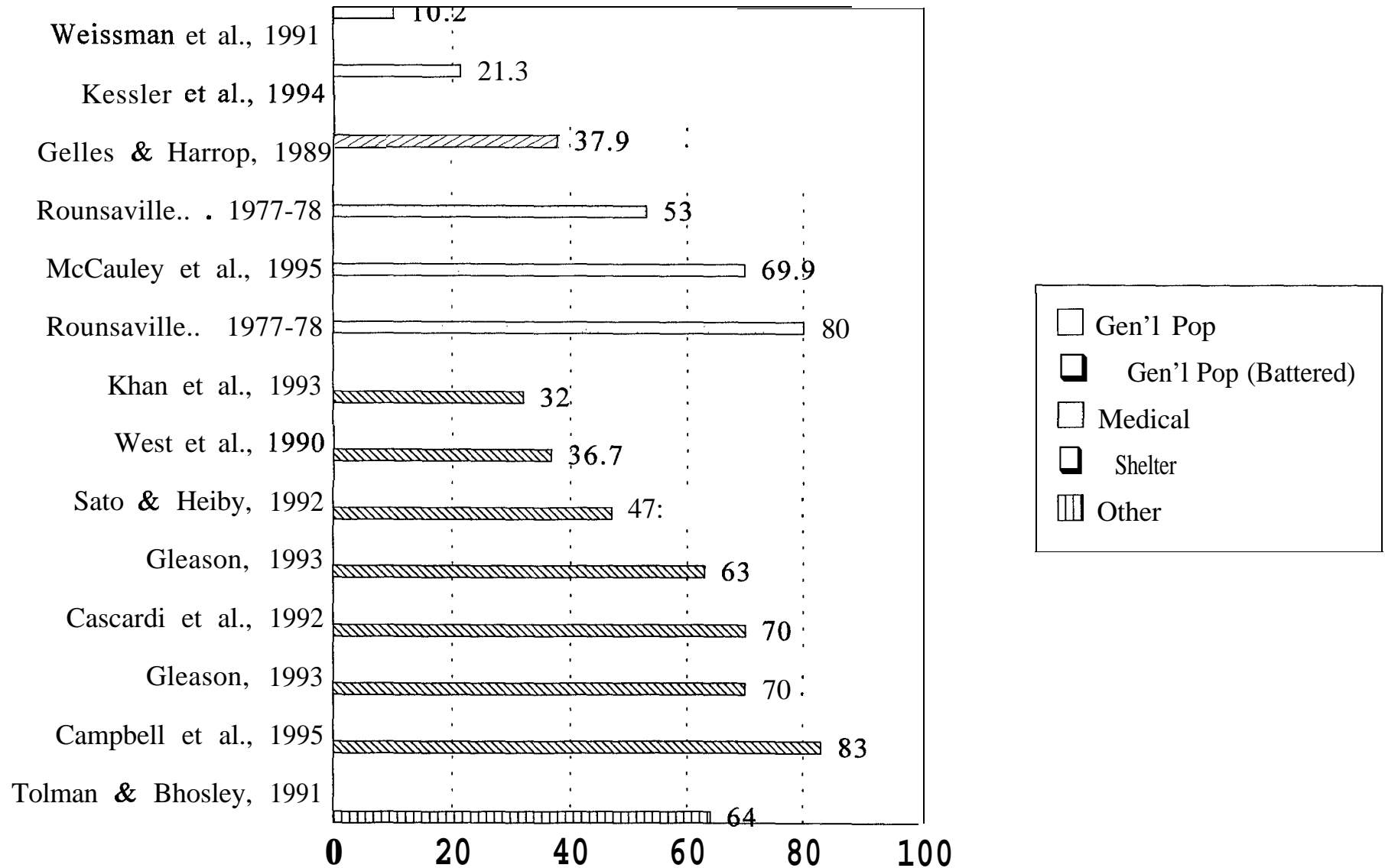


Figure 2. Prevalence of Suicidality (%) Among Battered Women in Existing Studies

Note. “General population” refers to prevalence rates among women in general populations. “General population (battered)” refers to prevalence rates among battered women from general population samples.

Prevalence of Suicidality (%) Among Battered Women

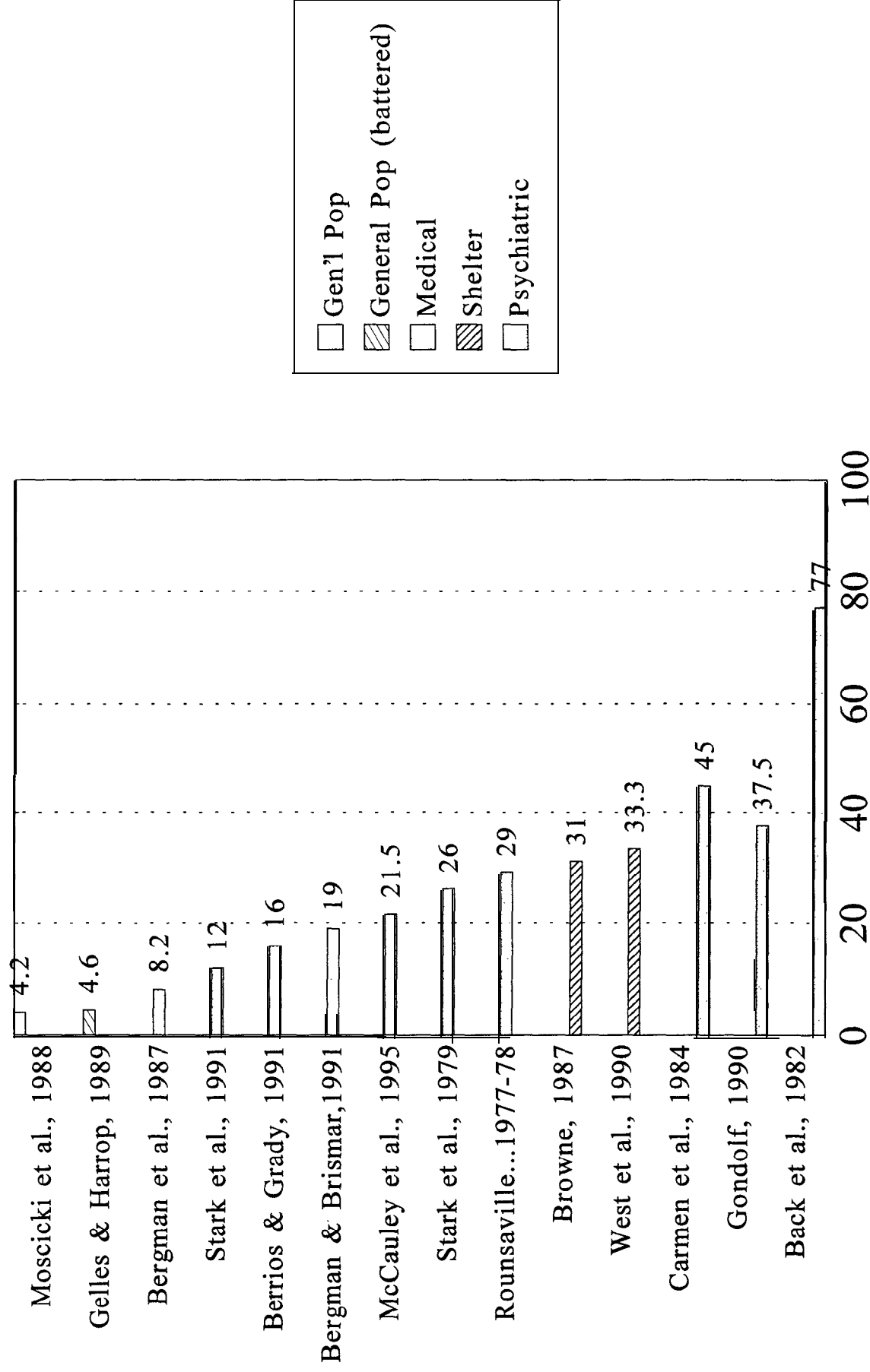


Figure 3. Prevalence of Alcohol Abuse (%) Among Battered Women in Existing Studies

Note. “General population” refers to prevalence rates among women in general populations.
“General population (battered)” refers to prevalence rates among battered women from general population samples.

Prevalence of Alcohol Abuse (%) Among Battered Women

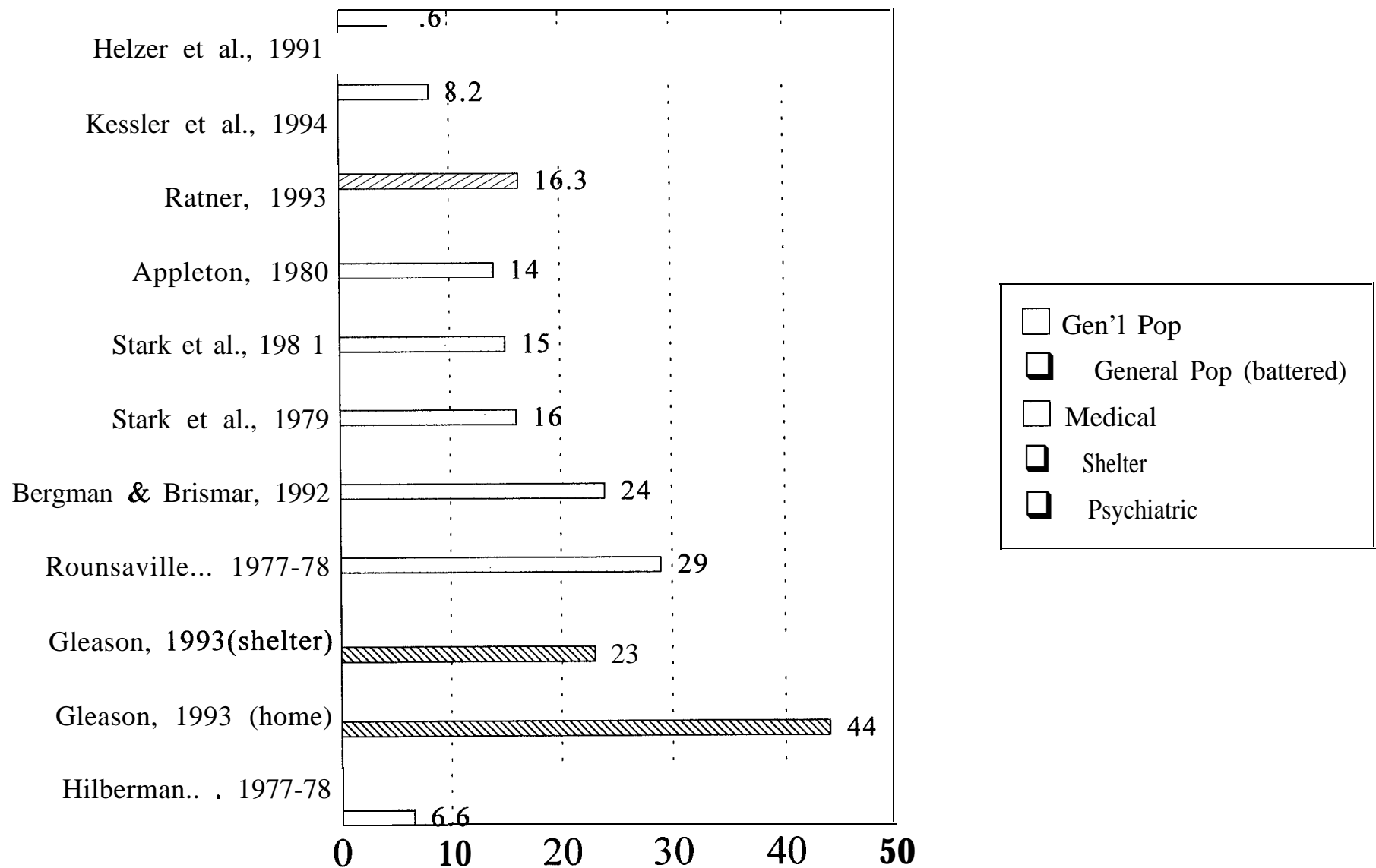


Figure 4. Prevalence of Drug Abuse (%) Among Battered Women in Existing Studies

Note. “General population” refers to prevalence rates among women in general populations.

Prevalence of Drug Abuse (%) Among Battered Women

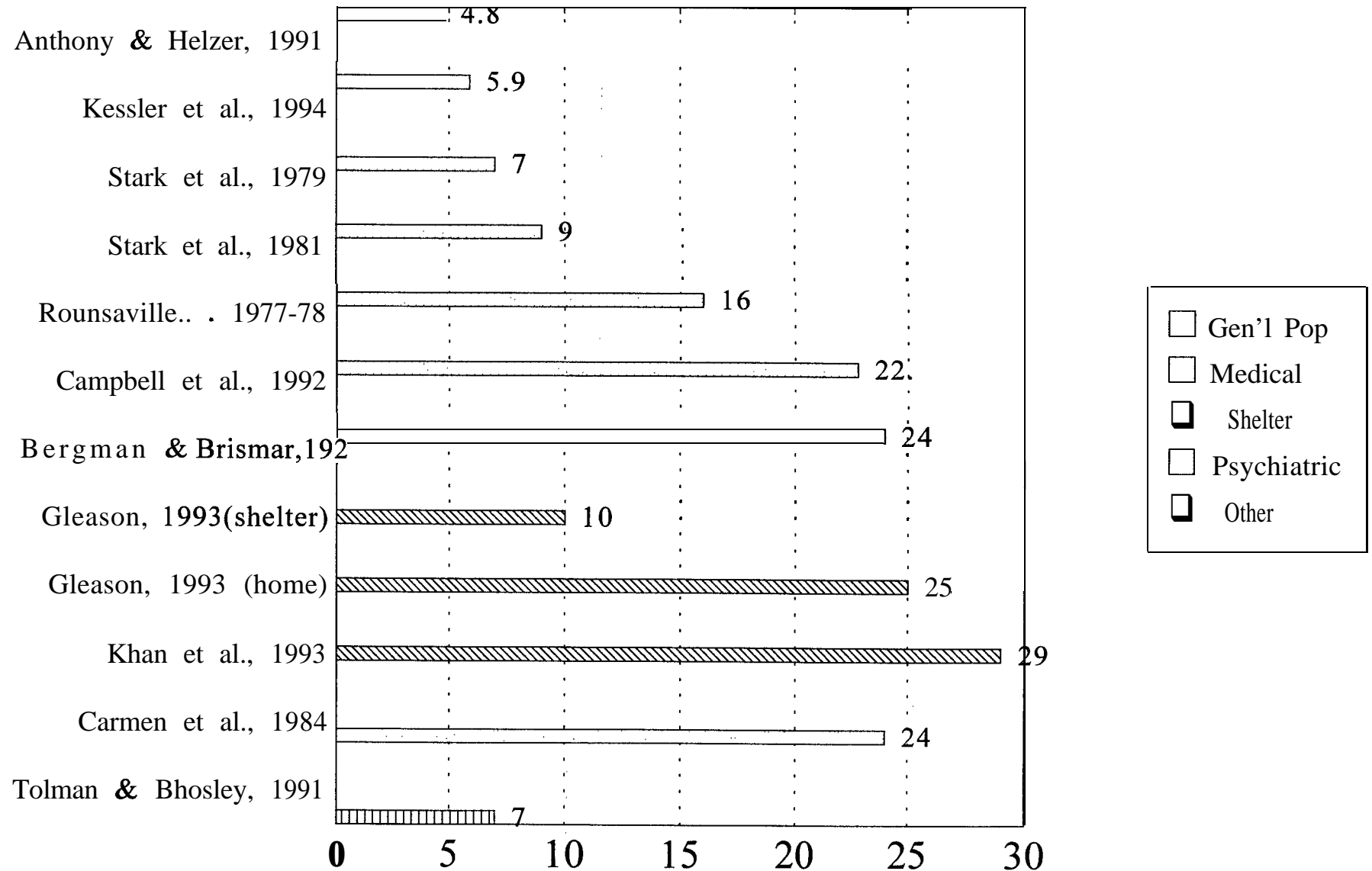
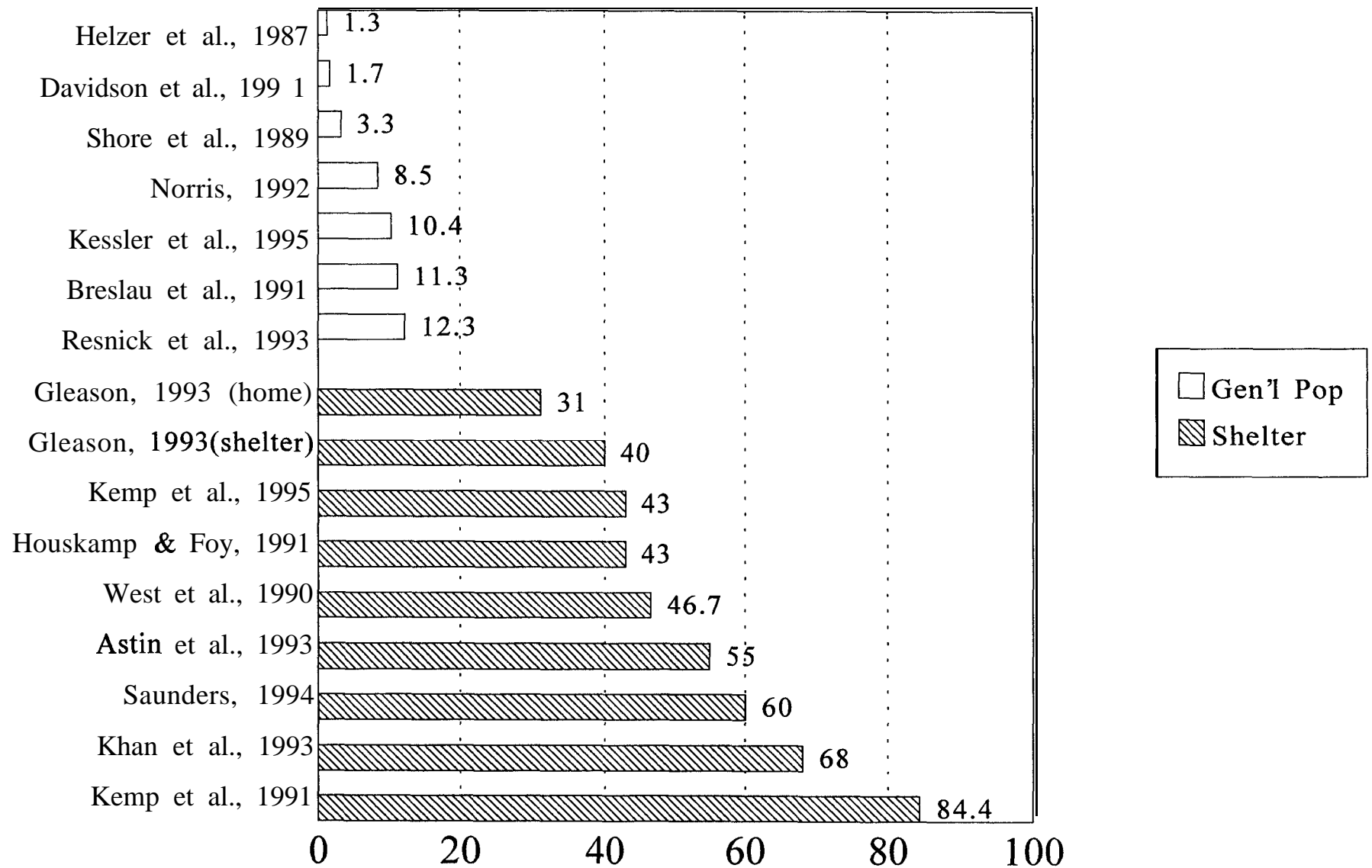


Figure 5. Prevalence of Posttraumatic Stress Disorder (%) Among Battered Women in Existing Studies

Note. “General population” refers to prevalence rates among women in general populations.

Prevalence of PTSD (%) Among Battered Women



APPENDIX

Abstracts of Literature on Mental Health Problems Among Battered Women

Title of Paper: Domestic Violence Against Women: Incidence and Prevalence in an Emergency Department Population

Author(s): Jean Abbott, Robin Johnson, Jane Koziol-McLain, Steven Lowenstein

Publication: JAMA: Journal of the American Medical Association, 273, 1995, 1763-1767.

Objectives: To determine the incidence, one-year prevalence, and cumulative prevalence of domestic violence among female emergency department patients

Types of Violence: Domestic violence

Data Sources: Self-administered questionnaire, medical charts

Methods: A multi-site study at two teaching emergency departments, two hospital walk-in clinics, and one private hospital ED in Denver. A bilingual (English and Spanish) questionnaire was offered to all adult women who presented at the sites during 30 simultaneous 4-hour blocks. Blocks were randomized by computer to provide a balanced sample of days and times. All women who presented to the ED for any reason was included, unless they were younger than 18 years, if they were transported directly to labor and delivery, or if they already participated in this survey during a previous ED visit.

Seventy-eight percent (78%) of all eligible patients completed the questionnaire. A log was kept of all eligible patients, and chart abstractors used a detailed standardized coding sheet. Variables included: age, insurance status, time and date of presentation, disposition, psychiatric or social service referral, documentation of pregnancy, short- or long-term use of alcohol or drugs, discharge diagnoses, non-trauma pain complaints. Women were alone when completing the questionnaire, and received information, practical and emotional support afterwards from the research assistants. Descriptive statistics were used to determine incidence and prevalence, and associations among variables.

Measurement: Domestic violence was defined as either an injury (hitting, etc.) or stress (from threats or violent behavior or from her own fears) to a woman caused by a boyfriend or husband. Questionnaire included modified questions from the Index of Spouse Abuse and the Danger Assessment Screen, as well as demographic items, CAGE alcohol questions, frequency of medical care visits, marital status, prior suicide attempts, presence of guns in the household, possible pregnancy, employment status, and education.

Sample Size and Demographics: 648 women. Race: 52% white, 21% Hispanic, 18% Black, 9% "other". Age: \bar{M} = 34 years (range 18-86). 62% unemployed, 49% had annual household income < \$10,000, 32% had less than high school diploma. Nonparticipants' age: \bar{M} = 38 years (range 19-93). Nonparticipants were more likely than respondents to arrive by ambulance (22% vs. 9%) and be admitted to hospital after ED care (24% vs. 9%).

Period of Study: April and May 1993

Costs: Not stated

Prevalence: Lifetime prevalence: 351 women (54.2%). Cumulative prevalence rates ranged from 48% at city clinic to 61% at university clinic. Of the 351 women, 110 (31%) stated they were currently with an abusive partner. One-month prevalence: 77 women (11.9%).

Incidence: 47 women (11.7%) of the 418 women who had boyfriend/husband

Mental Health Consequences: 81% of women with history of suicide attempts experienced domestic violence at some time in their lives, compared with 19% of those with no history of suicide attempts. 71% of patients who had positive screens for alcohol abuse had history of domestic violence, compared to 52% of those with negative screens.

Critique: Authors used bilingual instrument with demonstrated adequate validity and reliability, and kept detailed data on all eligible participants in order to compare differences between respondents and nonrespondents. Study had 78% response rate, with response varying across sites. Sample included women of color (48%) but limited generalizability; no comparison of sample demographics were made to local population. It is likely that researchers missed potential subjects unable to participate because of severe injuries due to domestic violence.

By including stress as well as injury in the definition of domestic violence, psychological abuse is acknowledged as part of the continuum of violence. Incidence of domestic violence was defined by a respondent's answer of "yes" or "unsure" to questions about the reasons for the patient's visit to the ED, since authors wished to avoid underestimating the incidence. This method appears reasonable in light of documented, consistent failure of medical personnel to inquire about or identify domestic violence in patients, but may lead to over-representation. Authors also acknowledge that use of gender-neutral questions would have permitted assessment of domestic violence in lesbian relationships.

Title of Paper: Psychosocial Outcomes of Children of Unipolar Depressed, Bipolar, Medically Ill, and Normal Women: A Longitudinal Study

Author(s): Carolyn A. Anderson, Constance L. Hammen

Publication: Journal of Consulting and Clinical Psychology, 61, 1993, 448-454.

Objectives: To examine psychosocial functioning in children of depressed mothers and to assess the stability of children's psychosocial functioning over time.

Types of Violence: Not applicable

Data Sources: Diagnostic interview (in-person), observation of subjects, self-administered questionnaire, telephone diagnostic interview, school records

Methods: A longitudinal study utilizing a convenience sample of mothers with unipolar depression, bipolar disorder, chronic medical illness, or who were psychiatrically normal and in good health. Mothers from the first three groups were recruited from a variety of clinical venues, and were included in the study if they met the research diagnostic criteria for either condition; they entered the study three months after mother's hospital discharge or admission to outpatient treatment. Mothers with early onset diabetes insulin-dependent diabetes and severe arthritis (illnesses that parallel the course of affective disorders) were recruited from specialty practices, newsletters, diabetes registry. Normal families were recruited from the same or demographically similar schools as families in the other groups; after a telephone screening, only those reporting no present or past treatment were evaluated by interview for inclusion.

Mothers were first seen alone for a diagnostic interview. Two to four weeks later, mother and child were interviewed and observed together. Children's evaluation was completed so that mother's status was unknown. At six-month intervals, follow-up assessments were conducted on mothers and children, usually by telephone, on diagnostic, life stress, and psychosocial functioning. Information on children's academic performance and school behavior were gathered from mothers and children, as well as teacher and school reports of grades, suspensions, special placements, etc. Questionnaires were completed by mothers who mailed them back to the researchers.

Comparisons between groups on psychosocial functioning over the follow-up period, and examination of differences between groups of offspring were conducted using analyses of variance and co-variance.

Measurement: Kiddie version of SADS (K-SADS); Child Behavior Checklist (CBCL) Behavior Problem scale and Social Competence scale; Conners Teacher Rating Scale; CBCL Teacher Report Form.

Sample Size and Demographics: 96 children (46 boys, 50 girls) aged 8-16 years at entry in the study, and followed for up to 3 years. 22 were offspring of 16 mothers with unipolar

depression, M age = 12.5 years; 18 were from 15 mothers with bipolar disorder, M = 13.8 yrs; 18 were from medically ill mothers, M = 12.11 yrs; and 38 were from mothers with no history of psychiatric disorder and medical illness, M = 11.9 yrs. Groups did not differ in mean age of children or by children's sex, nor by mother's education. 69%-93% of mothers had completed at least one year of college. Race: 32% of the unipolar group, 11% of the bipolar group, and 26% of the normal group were Black or Hispanic; the rest of the sample was white.

Period of Study: Two years

Costs: Not stated

Prevalence: Not applicable

Incidence: Not applicable

Mental Health Consequences: Children of women with unipolar depression displayed significant deficits in psychosocial functioning as compared to children of bipolar, medically ill, and psychiatrically normal women. Children of unipolar-depressed mothers were less socially active and competent, had more problematic school behavior, poorer academic performance, and more behavior problems. Of the four groups, these children appeared to function far more poorly across the various psychosocial indicators.

Critique: The authors designed their study to meet the specificity of risks to children's psychosocial functioning. The authors were able to recruit a sample whose subgroups did not differ significantly, and a control group was recruited that demographically matched the other three groups. The numbers in the subsamples were relatively small. Instruments utilized were demonstrated to have adequate test-retest reliability. Attrition was 16.6% over the two year period; authors identified the subjects who dropped out and stated that the level of attrition did not differ significantly by group. Diagnostic group differences were explored and significant differences in socioeconomic status were controlled for in the data analysis. Because some missing data would have resulted in a severe reduction of sample size, the authors adjusted their statistical analysis and conducted analyses of variance on pairs of variables.

The authors acknowledge the limitations of the study, including small sample sizes for maternal diagnostic groups, and incomplete CBCL data during the follow-up interviews that resulted in scores based on 60% of the original sample. Also, some information on the children's behavior problems and social competence was based on maternal reports, and the authors acknowledge some researchers' concerns that depressed women may report a more negative view of their children's behavior; authors suggest that a replication of the study using independent judgments of children's functioning is needed. This study was a well-constructed research project that offers a great deal of information on children of depressed mothers. Family violence and its effects on mothers' and children's psychosocial well-beings, was not examined by this study.

Title of Paper: The Battered Woman Syndrome

Author(s): Warren Appleton, MD

Publication: Annals of Emergency Medicine, 9(2), 1980, 84-91

Objectives: To 1) establish criteria for the diagnosis of battered woman syndrome (BWS); 2) identify factors that could be addressed as therapeutic tools on discharge; 3) establish a theoretical model of BWS to facilitate conceptualization of the depth of the problem

Types of Violence: Domestic violence

Data Sources: Self-administered questionnaire, nursing and crisis counseling notes and charts.

Methods: Two simultaneous parts: 1) A convenience sample of all women over 18 years of age presenting at Emergency Department. Women were asked to respond to an anonymous questionnaire administered by nursing staff to obtain demographic information about the female population as a whole and specifically about those women who are battered. 2) Women self-identified or were identified by staff as battered ("acutely battered") were also given the questionnaire. Afterwards, two forms, physical and psychosocial, were completed by the nursing staff, crisis team, or author.

Measurement: The first three sections of the questionnaire dealt with personal, partner, and parental characteristics of both nonbattered (control) and battered (BWS) populations. The fourth section dealt with characteristics of the battered woman and factors surrounding the battery. BWS population (qBWS) was divided into 3 frequency groups based on the number of batteries. Chi square was used at a level of $p > .05$.

Sample Size and Demographics: 2,106 women over 18 years old were seen in the ED. 320 excluded because of decreased consciousness. 620 (37%) of the remainder completed forms. White-85%, "Spanish descent"-4.8%; "Oriental"-3.6%, "black"-1.8%, and "other"-5.1%.

Period of Study: 10 weeks: April 3 to June 5, 1978.

Costs: \$111.26: Average cost of diagnosis and treatment in emergency department, exclusive of prescriptions.

Prevalence: Questionnaire women: Nonbattered - 401, BWS - 219. BWS 1-3=95; BWS3-10= 59; BWS10+=65. Acutely battered women=30.

Incidence: 35% of qBWS women completing questionnaire (women who admit they were struck). Incidence of psychiatric hospitalization of this group is 15.7%

Mental Health Consequences: BWS had incidence of psychiatric hospitalization of 15.7%, three times of controls. Eight (60%) of the acutely battered women had contact with psychiatric system, at least in outpatient therapy. Substance abuse: control and the lowest frequency of BWS reported abstinence twice as often as BWS3+. Increased alcohol consumption correlated with increasing frequency level of violence.

Critique: No description of instrument. Author modified Walker's Battered Woman Syndrome cycle of violence. Uses language that obscure the dysfunctional power dynamics and assault/victimization, eg "battering families suffer from a lack of information about agencies to assist in breaking the cycle" (89). Author does not look at environmental factors such as gender stratification, culture of violence.

Significantly correlated with battery: psychiatric history in either partner, [woman's] parental divorce and battery, alcohol usage, psychiatric history and significant criminal history, divorce and marriage counseling.

Title of Paper: Posttraumatic Stress Disorder Among Battered Women: Risk and Resiliency Factors.

Author(s): Millie C. Astin, Kathy J. Lawrence, and David W. Foy

Publication: Violence and Victims, S(1): 17-28, 1993.

Objectives: To test three hypotheses: (a) diagnosable post-traumatic stress disorder (PTSD) levels would be found among battered women; (b) level of trauma experienced would be associated with PTSD symptom level; (c) other psychosocial variables would also contribute to PTSD symptoms levels.

Types of Violence: Domestic violence.

Data Sources: Clinical survey of clients of three Los Angeles area battered women's shelters and one counseling center for battered women.

Methods: Self-administered questionnaire to assess violence, PTSD symptomatology, and psychosocial characteristics, completed in groups of 5 to 8 participants. Interviews on PTSD symptoms.

Measurement: PTSD symptomatology was measured using the Impact of Event Scale (IES) and the PTSD Symptom Checklist. Violence exposure was measured using Form N of the Conflict Tactics Scale (CTS). Social support was measured using the short form of the Support Questionnaire (SSQSR). Stressful life events were measured using the Life Experience Survey (LES). The Religiosity was measured using the Age Universal Religious Orientation Scale. A self-report questionnaire designed for this study was used to assess demographic variables and developmental stressors in the family of origin.

Sample Size and Demographics: 53 battered women. **Age:** 18-58 years $M = 33$, $s.d. = 8.8$. **Race:** European American--57%, African American--19%, Latino--17%, Asian American--4%, Native American--4%. **Education:** completed high school--60%, not graduated from high school--21%, completed college--19%. **Employment status:** employed or student--57%, unemployed or disabled--43%. **Marital status:** separated or divorced--63%, same civil status (married or single) as during the battering relationship--34%, remarried--2%, widowed--2%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Because of the sampling design, all women were battered. Levels of severity were not stated.

Incidence: Not stated.

Mental Health Consequences: 55% met criteria for PTSD using the PTSD Symptom Checklist and 58% met PTSD criteria using the IES. 33% met both sets of criteria.

Critique: PTSD was measured using well-validated instruments and multiple methods (self-report and interview). Relationships between the PTSD measures are reported. However, the sample is small and representativeness is questionable.

Title of Paper: A Study of Battered Women in A Psychiatric Setting

Author(s): Susan Malone Back, Robin Dee Post, Genet D'Arcy

Publication: Women & Therapy, 1(2), Summer 1982, 13-26

Objectives: To compare the characteristics of battered women and nonbattered women in an inpatient psychiatric unit.

Types of Violence: Domestic violence, childhood sexual and physical abuse

Data Sources: Patient medical charts

Methods: All female patients hospitalized between 1975 and 1978 at a short-term treatment facility were included in the study if 1) they had a history of marriage or live-in relationship with a male partner, and 2) they had completed an MMPI at the beginning of their hospitalization. Patients were designated as battered women on the basis of a documented (on their patient chart) history of physical abuse by one or more partners. Twenty-four patients were excluded because there was insufficient information about their relationships with men.

Data were collected from patients' charts to assess their history and current functioning, and their MMPI scores. According to patients' discharge diagnoses, patients were designated as having a psychiatric disorder according to the DSM-II. Data were recorded by a medical student blind to predictors and group assignments.

A series of t-tests compared ages and characteristics, and MMPI validity and clinical scale scores for the battered and nonbattered women. Stepwise discriminant function analyses were performed for age and the MMPI scales for the two groups to determine 1) means and standard deviations of the predictor variables, 2) which variables were significant predictors of battering, and 3) the optimal linear combination of scales that would classify the patients as battered or nonbattered. Chi-square analyses were used to determine how accurately the predictor variables classified individuals. To control for differences possible due to age, a second series of statistical analyses was done on an age-matched subsample of 30 battered and 30 nonbattered women.

Measurement: Minnesota Multiphasic Personality Inventory (MMPI). Patients were compared on: childhood experiences, current life functioning, psychiatric symptoms, and MMPI scores.

Sample Size and Demographics: 116 female psychiatric patients, 24 excluded due to lack of information on relationships, resulted in a sample of 91 women: 30 battered and 61 nonbattered. Age: battered women- M = 30.5, nonbattered-M = 39.52. Education: Battered women: did not complete high school-47%, high school diploma-11%, entered college or trade school-42%; Nonbattered- did not complete high school-16%, high school diploma-30%, entered college or trade school-54%. Currently employed: battered women-31%, nonbattered-

42%; but few had “substantial independent means.”

Period of Study: 1975-197s

Costs: Not stated

Prevalence: Of the 116 women patients, 30 reported a history of battering by partners, and 62 reported no history. 50% of battered women report history of childhood physical abuse, compared to 22% of nonbattered women (statistically significant difference). Childhood sexual abuse was reported by 20% of the battered women, and 8% by the nonbattered women.

Incidence: Not stated

Mental Health Consequences: **History** of suicide attempts: 77% of battered women, 45% nonbattered, 60% age-matched nonbattered. Alcohol/drug abuse: 43% of battered women, 34% nonbattered, 37% age-matched nonbattered. Personality disorder: 83% of battered women, 45% nonbattered, 53% age-matched nonbattered. Thought disorder: 7% of battered women, 2 1% nonbattered, 2 1% age-matched nonbattered. Affective disorder: 10% of battered women, 32% nonbattered, 17% age-matched nonbattered. MMPI results: battered women had significantly higher *F* and lower *K* scale scores than nonbattered women.

Critique: The authors hoped that if a significant number of patients in the sample could be classified correctly as battered or not based on the MMPI, the instrument could serve as a diagnostic tool to identify women in, or at risk of, abusive relationships. The question is, however, if these attributes are characteristic of certain kinds of women, or are they the result of the abusive relationship.

The authors found that the battered women were significantly younger than the nonbattered women in the sample. When they matched groups by age, authors suggest that age, not abuse, was the more important predictor for: the number of suicide attempts, whether women were currently married, their level of education, diagnosis of Thought or Affective disorder, and childhood history of physical abuse. Authors also found that the battered women were homogeneous re clinical diagnosis, but the differences were not confirmed by the MMPI findings.

Shortcomings of the study include inconsistent data collection when the patients were first interviewed when hospitalized; there was no consistency during intake re specifically asking patients about domestic violence, so there is probably some incomplete data on patients' documented history abuse. Statistically significant findings are limited by the inconsistent primary data collection and the relatively small sample size. Incomplete demographic information was presented on participants and excluded patients.

The authors conclude that both clinical work and accuracy of research would be enhanced if routine questions about domestic violence are incorporated into psychiatric evaluation procedures, and that further research should be conducted about the psychological parameters of the batterer, and on the dynamics of the battering relationship.

Title of Paper: Suicide Attempts by Battered Wives

Author(s): B. Bergman and B. Brismar

Publication: *Acta Psychiatrica Scandinavica*, 83: 380-384, 1991.

Objectives: To describe the scope of suicidal behavior among battered wives.

Types of Violence: Domestic violence.

Data Sources: Stockholm County Council's computer files on inpatient care, medical records, and psychiatric records for 117 battered women seen at the surgical emergency room of Huddinge Hospital, and 117 control women selected through the population register and matched on age, nationality, and geographic area in Greater Stockholm.

Methods: Suicide rates of battered women were compared to those of controls over a 16-year follow-up period. Rates for control women were compared to rates found as part of a study of 600 patients treated in the hospital because of suicide attempts. Suicide rates of controls and these 600 patients were similar.

Measurement: Medical record data were coded.

Sample Size and Demographics: 117 women in battered group. Age: $M = 33$, range 16-75, at the time of battering. Nationality: born outside Sweden --56% (compared to norm of 20% of women in the catchment area).

Period of Study: 1983-84. Authors state that register data were studied for 16 years, but this isn't logically possible (that would make follow-up 1999-2000).

Costs: Not measured.

Prevalence: Not measured.

Incidence: Not measured.

Mental Health Consequences: During the study period, 19% of the battered made at least 1 suicide attempt resulting in inpatient care, compared to 1.7% of the control women.

Critique: A limitation of the study is the unclear follow-up period. Also, because it is unclear how battering was diagnosed in the battered and control groups, it is possible that undetermined amounts of domestic violence went undetected in both groups. The study productively used existing data to provide convincing evidence that suicide attempts are more common among battered women than non-abused women.

Title of Paper: Can Family Violence be Prevented? A Psychological Study of Male Batterers and Battered Wives

Author(s): B. K. Bergman and B. G. Brismar

Publication: Public Health, 106: 45-52, 1992.

Objectives: To establish the importance of social background factors as violence alcoholism in the family of origin for the eruption of similar problems in the next generation.

Types of Violence: Domestic violence.

Data Sources: Clinical survey of 49 battered wives seeking hospital care and 18 battering husbands in jail.

Methods: Women seen in the surgical emergency department with injuries due to battering were interviewed 1-2 days after the injuries were sustained, while still in the hospital. The interviews were supplemented with medical record data. Because of practical constraints, the men who had injured these women were not studied; therefore, male batterers were sampled from a jail population and interviewed. The men had been sentenced for assault and battery of their wives or partners. The interviews were supplemented by legal record data.

Measurement: Not specified.

Sample Size and Demographics: 49 battered wives and 18 male batterers. **Age:** women: \bar{M} = 33, range = 19-55; men: \bar{M} = 37, range = 19 to 57. **Marital status:** women: married or cohabiting--61%; men: married or cohabiting--50%. **Country of birth:** women: Sweden--51%, abroad--49%; men: Sweden--50%, abroad--50%. **Occupation:** women: blue collar--45%, white collar, 16%, unemployed or retired--29%, other not employed (e.g. students, homemakers)--10%; men: blue collar--56%, white collar 11%, unemployed or retired--33%, other not employed--0%. **Education:** None had a university degree.

Period of Study: Women: 1983-1984. Men: 1989-1990.

Costs: Not measured.

Prevalence: Women: not applicable (all women had been battered). Men: not stated.

Incidence: Women: 6% were admitted for a first episode for battering (i.e. 94% had been battered before).

Mental Health Consequences: Alcohol abuse: women--24% had current alcohol

dependence. **Drug abuse:** women--24% had lifetime cannabis abuse; 14% had lifetime amphetamine abuse; 7% had lifetime heroin/cocaine/etc. abuse.

Critique: A strength of the study is use of multiple methods of data collection (interviews and medical records) and documented severity of abuse. Limitations include apparently non-systematic measurement, small sample size, lack of sample representativeness, and lack of information on date of onset of domestic violence and substance abuse.

Title of Paper: Psychiatric Morbidity and Personality Characteristics of Battered Women

Author(s): Bo Bergman, M.D., G. Larsson, B. Brismar, and M. Klang

Publication: Acta Psychiatrica Scandinavica, 76, 1987, 678-683.

Objectives: To describe the psychiatric symptomatology and the psychiatric morbidity of women exposed to physical violence, and investigate the personality characteristics of these women.

Types of Violence: Domestic violence (physical assault by husband or steady companion).

Data Sources: Medical exams and psychosocial assessments of 49 battered women admitted to the surgical emergency ward of Huddinge University Hospital in Stockholm, Sweden.

Methods: Psychosocial data of battered women were compared to those of a control group over a one-year period. Comparisons were made of psychosocial data collected one to four days after the assault and at a one-year follow-up interview/assessment. Medical records and psychiatric case notes for the period extending from 10 years before to 1 year after the assault were compared; standardized differential personality inventory questionnaires and semantic differential scales were utilized; group comparisons were made with aid of Chi-square test, Fisher's exact test and the Goodness-of-fit test.

Measurement: CAGE questionnaire and "The Ten Question Drinking History" questionnaires for assessing alcohol consumption; "The Comprehensive Psychopathological Rating Scale" for assessing psychiatric symptomatology, including depression.

Sample Size and Demographics: Size: 49 battered women; 49 nonbattered women. Age (of battered group): \bar{x} =33 years; range: 19-55 years of age at time of battering. Ethnicity: 51% Swedish;-49% non-Swedish.

Period of Study: Eight months (participant's medical records and psychiatric case notes for the period extending from 10 years before to 1 year after the assault were also studied).

Costs: Not stated.

Prevalence: All battered women were physically abused. Levels of severity not stated.

Incidence: Among the battered group, 6% were battered for the first time.

Mental Health Consequences: 5 1% of the battered women were very heavy consumers of alcohol, and 35% were rated as depressed. All patients who were rated as moderately to deeply depressed were from the battered group.

Critique: The number of drop-outs from the 1-year follow-up was very large (55%).

Title of Paper: Aetiological and Precipitating Factors in Wife Battering

Author(s): B. Bergman, G. Larsson, B. Brismar, and M. Klang

Publication: Acta Psychiatrica Scandinavica, 77, 1988, 338-345

Objectives: To analyze, in a Swedish population, the previous and current social situation of battered wives, their abuse of alcohol and drugs, and the events leading to the battering

Types of Violence: Domestic violence (including child abuse)

Data Sources: Interview data

Methods: A prospective study. A convenience sample of 49 battered women who attended the surgical emergency department of a hospital because of physical injuries due to battering. One to four days after the assault, a structured interview was conducted.

Measurement: Each woman was asked to describe their childhood and adolescence, current social situation, reactions of their children to the violence, and previous and present maltreatment. Women were asked to assess the mental well-being of any children living at home. Alcohol consumption was assessed. The CAGE questionnaire and the Ten Drinking History Questionnaire were used to determine if a woman was a high or low consumer of alcohol. Chi Square test or Fisher's exact test were used to determine statistical differences.

Sample Size and Demographics: 49 women. Age: \bar{x} =33 years. Nationality: 51% Swedish, 20% Finnish, 29% non-Scandinavian (mostly from southern Europe).

Period of Study: Not stated

Costs: Not stated.

Prevalence: All women were assaulted by their partners. Alcohol consumption: 51% of women were classified as high alcohol consumers; 88% of assailants (based on women's reports). 51% of sample experienced family violence in childhood. 22% of sample described father as alcoholic, 27% as often/sometimes drunk. 29% of sample were sexually exploited as children. In almost two-thirds of the current assaults, alcohol consumption was a predominant underlying factor.

Incidence: Six percent. 94% of sample stated they had been maltreated before.

Mental Health Consequences: Substance abuse: 51% of women classified as high consumers of alcohol; 51% used sedatives daily or periodically.

Critique:

The authors are looking for the “reasons” for battering in the women’s backgrounds and reports of what accompanied the abuse. Childhood or previous adult sexual abuse and alcohol consumption are associated with current abuse. 67% of the women stated they were dependent upon the batterer, half emotionally, half economically. By asking the women to report the “reasons” for the battering, blame and accountability is shifted away from the assailant. The authors seek “reasons” for the battering in the women’s backgrounds, in the rates of alcohol consumption, sociodemographic characteristics, and the emotional dependence of the women on the batterer. Authors cite another of their studies of the high incidence of “psychiatric morbidity and special personality characteristics” of battered women.

Regarding why women stay with the abusers, authors conclude that “social heredity, heavy alcohol consumption, and great emotional dependence upon their abusive spouses seem to have been the main reasons.” No regard is paid to other dimensions of battering such as fear of being killed if the woman tries to leave relationship, shame, cultural/social support for gender inequality and violence against women.

Authors state that study is “prospective” but all the data examined is current or retrospective. A “treatment program” is briefly mentioned, but there is no follow-up information.

A poor article that fails to provide a system-oriented approach to battering, and instead looks for “reasons” on the part of the victims.

Title of Paper: Domestic violence: Risk factors and outcomes

Author(s): Daniel C. Berrios, M.D., M.P.H., and Deborah Grady, M.D., M.P.H.

Publication: 1991, Western Journal of Medicine, 155, 133-135

Objectives: To describe the risk factors for and outcomes of domestic violence.

Types of Violence: Domestic violence (men battering women)

Data Sources: Standardized interviews

Methods: All women who presented for medical care at San Francisco General Hospital with a chief complaint of injury as a result of domestic violence, or who reported to hospital staff that they were victims of domestic violence, were referred to a domestic violence victims services agency. Staff of this agency completed standardized data forms during structured personal interviews with the women.

Measurement: Structured interview (not described).

Sample Size and Demographics: 218 women. **Age:** Median = 29, range = 16 to 66.
Ethnicity: Asian/Pacific Islander -- 10%; Black -- 42%; **Latina** -- 17%; White -- 13%; Other -- 3%; Unknown -- 16%.

Period of Study: "Since 1983"

C o s t s : Not stated. 28% of the women required hospital admission, and 13% required major surgical treatment.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable (only battered women were studied).

Mental Health Consequences: 16% of the women had attempted suicide. In 51% of cases, children lived in the home; in 35%, at least one child had witnessed the abuse, and in 10%, the children were abused by the batterer.

Critique: Strengths of the study include a large sample of battered women. Weaknesses include lack of representativeness (in addition to being restricted to women who sought hospital treatment, the record was less than half completed for 264 women, who were dropped from the study); limitations in measurement of domestic violence (many other victims may have sought care in this setting but not disclosed their victimization), and lack of information in the paper about specifics of measurement.

Title of Paper: A test of two explanatory models of women's responses to battering

Author(s): Jacquelyn C. Campbell

Publication: 1989, Nursing Research, 38, 18-24.

Objectives: To compare the responses of battered women with those of other women experiencing serious difficulties in an intimate relationship; and to compare the utility of two theoretical models, grief and learned helplessness, as explanations for these responses.

Types of Violence: Domestic violence (including sexual assault)

Data Sources: Interviews and self-report questionnaires.

Methods: Women were recruited by newspaper advertisements and bulletin board postings in two metropolitan areas and in battered women's shelters in these areas, and were eligible if they reported serious problems in an intimate or marital relationship for at least a year.

Measurement: Conflict Tactics Scale augmented with an item about repeated sexual abuse. Beck Depression Inventory.

Sample Size and Demographics: 193 women (97 battered, 96 non-battered). 24% of the battered women were shelter residents. Age: 60% were younger than 35. Ethnicity: 36% belonged to a minority ethnic group. Income: 38% were in households below the poverty level. Marital status: 35% were married. Employment: 71% were employed or attending school full time.

Period of Study: Not stated.

Costs: Not assessed.

Prevalence: 50.2% of the women were battered. 22.3% were sexually abused by their partners.

Incidence: Not assessed.

Mental Health Consequences: Mean depression levels were high in both battered (17.7) and non-battered (15.7) women. Battered women (n = 17) were significantly more likely than non-battered women (n = 8) to be in the severely depressed category (scoring 30-63).

Critique: Strengths include careful measurement of domestic violence and depression, Weaknesses include the convenience sample and limitations in the descriptive data provided.

Title of Paper: Women who use Domestic Violence Shelters: Changes in Depression Over Time

Author(s): Rebecca Campbell, Cris M. Sullivan, and William S. Davidson II

Publication: Psychology of Women Quarterly, 19: 237-255, 1995.

Objectives: To examine changes over time in the levels of depression among women who had recently used a domestic violence shelter.

Types of Violence: Domestic violence.

Data Sources: Longitudinal interview study of residents in a Midwestern domestic violence shelter.

Methods: Residents who agreed to participate were interviewed upon shelter exit, 10 weeks later, and 6, 12, 18, and 24 months later. Personal interviews were used when participants were in the general area; those who had moved were interviewed by telephone.

Measurement: Degree of domestic violence was measured with a modified version of the Conflict-Tactics Scale (CTS) Violence subscale. Depression was measured with the Center for Epidemiological Studies Depression Scale (CES-D).

Sample Size and Demographics: 139 women who had stayed at least one night in the shelter and were alive at the time of follow-up. **Race:** European American--45%, African American--43%, Latina (mostly Mexican American)--8%, Asian American--1%, others--3%. **Education:** less than high school--36%, high school graduate--30%, some college--24%, college graduate--5%, trade school--4%, professional degree--1%. **Marital status (at onset of study):** married--34%, separated--6%, divorced--1%, cohabiting--45%, unmarried couple not living together--5%, ex-girl/boyfriend (??)--7%, dating, but not in a relationship--1%, others--1%. **Parental status (at onset of study):** 79% had at least 1 child living with them. **Employment status (at onset of study):** employed--17%, student--1%. **Income (at onset of study):** below poverty level--60%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable (only battered women were studied).

Mental Health Consequences: At shelter exit, 83% were depressed (CES-D \geq 16). At 10-week follow-up, 68% of the 45% who had been recently abused were depressed, as were 50%

of those who had not been recently abused. At 6-month follow-up, 71% of the 43% who had been recently abused were depressed, as were 49% of the 57% who had not been recently abused. When previous depression and abuse, and current locus of control and social support were controlled, current abuse was marginally significantly related to depression ($p = .06$).

Critique: The longitudinal design and use of a well-validated depressive symptom measure are strengths of the study. That depression persists mostly among women whose experience of domestic violence persists, and that current abuse was related to current depression when previous depression and abuse were controlled, suggest a causal relationship between abuse and depression.

Title of Paper: Victims of Violence and Psychiatric Illness

Author(s): Elaine (Hilberman) Carmen, Patricia Perri Rieker, Trudy Mills

Publication: American Journal of Psychiatry 141, 1984, 378-383.

Objectives: To investigate the relationship between physical and sexual abuse and psychiatric illness in a psychiatric inpatient population.

Types of Violence: Physical and sexual abuse

Data Sources: Psychiatric inpatient records of 188 adults and adolescents discharged from an adult inpatient unit.

Methods: Psychiatric record review

Measurement: The research team developed a standardized coding instrument to analyze demographic information; social, medical, and psychiatric histories; and behavior before and during hospitalization, along with details on the type and extent of violence. Violence was defined as any form of serious physical or sexual abuse, including child abuse, incest, marital violence, and assault or rape occurring outside the family.

Sample Size and Demographics: 188 patients, 66 men and 122 women. Age: 12-88 years; adolescents-15%, elderly-4%. Race: European American-80%, African American-20%. Marital Status: married-25%, never married-47%, others not stated. Education: less than high school-26%, college graduate-18%, others not stated. Occupation: professionals-21%, in clerical, sales, craft, or unskilled-33%, others not stated. Income: <\$10,000 annually = 52%, others not stated. Employment: disabled or unemployed-35%, others not stated.

Period of Study: January 1980 - June 1981

Costs: Not measured

Prevalence: 43% of the sample (53% of the women, 23% of the men) had histories of physical and/or sexual abuse. 90% of this group had been abused by family members. Of the abused patients, 51% (37) of the women had been abused by husbands or former husbands. These 37 women are 30% of all women patients in the study.

Incidence: Not measured

Mental Health Consequences: Abused patients were more likely than non-abused patients to have a history of suicide attempts and to have alcoholic fathers, and to have organic symptoms or confusion on admission. There were no differences between abused and non-

abused patients with respect to history of alcohol or street drug abuse, or in suicidality, aggression, depression, substance abuse, conduct disorder, anxiety, psychosomatic disorders, or psychosis on admission. Abused patients tended to remain in the hospital longer than non-abused patients.

Critique: Limitations of the paper include reliance on psychiatric records of abuse (since there is evidence that it may be under-detected) and lack of standardized measures of either abuse or mental disorders. For the purpose of the present study, the aggregation of all forms of physical or sexual abuse, regardless of the identity of the offender, is a limitation since mental disorders associated with domestic violence **cannot** be identified. Lack of information on dates of onset of abuse and mental disorder precludes inferences about causal direction. However, the study provides some of the first evidence of the high prevalence of various forms of abuse in a clinical population.

Title of Paper: Depressive Symptomatology, Self-Esteem, and Self-Blame in Battered Women

Author(s): Michele Cascardi and K. Daniel O'Leary.

Publication: Journal of Family Violence, 7:249-259, 1992.

Objectives: To estimate the prevalence and relationships among depressive symptoms, poor self-esteem, and self-blame among battered women.

Types of Violence: Domestic violence.

Data Sources: Self-report data from 33 women seeking therapeutic assistance from the Nassau County Coalition Against Domestic Violence.

Methods: Clients were asked to complete self-report instruments following intake interviews but before receiving services from the agency.

Measurement: Degree of domestic violence was measured using a modified Conflict Tactic Scale (MCTS). Open-ended items were used to assess types of injuries sustained. Depressive symptoms were measured using the Beck Depression Inventory (BDI). Blame was measured using a "blame scale" constructed for the study. Self-esteem was measured using the Rosenberg Self-Esteem scale (RSE).

Sample Size and Demographics: 37 women were. **Age:** $M = 31$, range 19-50. **Race:** European American--67%, others not stated. **Religion:** Catholic--61%, others not stated. **Marital Status:** Married--67%, single--27%, divorced--6%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: 70% of the women scored greater than 14 on the BDI; 52% scored greater than 20.

Critique: Limitations include small sample size and lack of generalizability. Strengths include use of a well-validated depression measure.

Title of Paper: The Cost of Mental Health Care for Victims of Crime

Author(s): Mark A. Cohen and Ted R. Miller

Publication: 29 pages. Unpublished.

Objectives: To report on the results of a survey to determine: (1) the number of crime victims receiving mental health counseling, by type of crime, and (2) the annual cost of treatment for each type of crime victim.

Types of Violence: Child Abuse (sexual and physical), rape, assault including domestic violence, robbery, burglary or theft, kidnapping, arson, witnessing a murder, drunk driving, and other.

Data Sources: Pilot survey of 168 mental health professionals

Methods: Telephone interviews of eight selected professional organizations, including the American Psychiatric Association, American Psychological Association, National Association of Social Workers, American Association of Marriage & Family Therapy, American Association of Pastoral Counselors, American Mental Health Counselors Association, American Family Therapy Association, and American Society of Group Psychotherapy & Psychodrama. Also included were three other professional associations-- American Association of Pastoral Counselors, American Family Therapy Association, and the American Society of Group Psychotherapy and Psychodrama. Random samples were drawn from directories of the organization. Overall, direct telephone contacts of 189 out of 339 (56%) potential respondents were made. Of these 189, 20 refused to participate and one was discarded when the responses were found to be inconsistent. Telephone interviews were conducted lasting between 15 and 40 minutes.

Measurement: The following variables were measured: number of victims served, number of individual and group sessions, charges per individual and per group visit, source of payment, and use of volunteers.

Sample Size: 168 mental health professionals

Period of Study: 1991

Costs:

- The total value of counseling/treatment received amounted to an estimated \$8.3 - \$9.7 billion in 1991. Since only 70% of normal fees are actually paid, actual expenditures are estimated to be between \$5.8 and \$6.8 billion.
- Of this total, 353,00 - 412,000 persons were estimated to have suffered assault including domestic violence, amounting to a total value of \$572.7 - \$885.5 million.
- An additional 237,000 - 361,000 were estimated to have been the victims of attempted or

completed rape, amounting to a total value of \$511.9 - \$863.0 million.

- It is estimated that more than 12% - 14% of the total mental health care costs in the United States are for crime-related counseling.

Prevalence: An estimated 3.1 to 4.7 million crime victims received mental health care in 1991.

Incidence: Not applicable

Critique: A telephone survey is probably not the ideal method to gather accurate data on the number of crime victims served and the length of treatment. Other approaches were considered, but were eliminated for various reasons. The organizations sampled do not represent 100% of all the mental health professionals who might treat victims of crime and therefore are non-representative of all professionals. Two groups not represented in the sample are psychiatric nurses and psychosocial rehabilitation workers. In addition, it is possible that those who ultimately responded to the survey are not representative of the sample population. Given the above limitations, it is not clear how the numbers were inflated to the totals.

Title of Paper: Battered Women's Cognitive Schemata

Author(s): Mary Ann Dutton, Kimberly J. Burghardt, Sean G. Perrin, Kelly R. Chrestman, and Pauline M. Halle

Publication: Journal of Traumatic Stress, 7:237-255, 1994.

Objectives: To examine battered women's cognitive schema in relation to post-traumatic reactions to violence, cognitions about violence, and sexual victimization history.

Type of Violence: Domestic violence, childhood sexual abuse history, sexual abuse by partner.

Data Sources: Intake data from 72 battered women seeking care at a specialized family violence outpatient clinic.

Methods: When women requested services at the clinic, they were administered preliminary questionnaires, clinical interview, and an assessment battery.

Measurement: Demographic data, family history, and abuse history were measured using a structured clinical interview. Posttraumatic stress disorder was measured using The Global Symptom Index (GSI) of the SCL-90-R; the CR-PTSD derived from the SCL-90-R; the MMPI-derived PTSD subscale (MMPI-PTSD); and the Impact of Event scale (IES).

Sample Size and Demographics: 72 women. **Age:** $M = 32.7$, $s.d. = 9.2$, range = 18-55. **Race:** European American--82.1%, African American--11.9%, Latina--6.0%. **Marital status:** married--50.7%, divorced--11.9%, divorce action pending--14.9%, never married--22.4%. **Family income:** <\$20,000/year--70%. **Education:** less than high school--11.9%, high school--58.2%, some college--28.4%, graduate school--1.5%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: Not stated. (Associations of cognitive schemata with post-traumatic stress are reported, but not overall levels of post-traumatic stress).

Critique: The sample is small and not representative of women at this clinic, clinic users in general, or all battered women. Prevalence of post-traumatic stress disorder is not stated. However, well-validated measures are used and relationships among them are evaluated.

Title of Paper: Traumatic Responses Among Battered Women Who Kill

Author(s): Mary Ann Dutton, Laura C. Hohnacker, Paulin M. Halle, Kimberly J. Burghardt

Publication: Journal of Traumatic Stress, 7, 1994, 549-564.

Objectives: To compare differences in type and severity of violence, perceived social support, and level of post-traumatic stress between battered women charged with a violent crime against an abusive partner, and those who are seeking help through a mental health clinic.

Types of Violence: Domestic violence

Data Sources: Administered questionnaire

Methods: A convenience sample of 33 women charged with attempted or actual homicide of their abusive partners defined the forensic sample. Another sample was comprised of 30 battered women seeking treatment services from a family violence program at a community mental health agency. Subjects were selected to match the forensic group on age and ethnicity. The questionnaire was administered to the 33 forensic subjects pursuant to a pretrial evaluation in a criminal trial, and to the 30 clinical subjects as a component of intake procedures for mental health services. SAS software was used for statistical analysis. Chi-square analyses and analyses of variance and covariance procedures were conducted, with Bonferroni correction procedures to avoid a Type I error.

Measurement: Abusive Behavior Observation Checklist (a modified version of the Conflict Tactics Scale); Interpersonal Support Evaluation List; Global Severity Index; Crime Related Post-Traumatic Stress Disorder Scale; PTSD-MMPI; Intrusion and Avoidance subscales of the Impact of Event Scale.

Sample Size and Demographics: 33 battered women in the forensic sample: 18 (55%) Anglo and 15 (45%) African American; average age was 40 and 34, respectively. 30 battered women in the clinical sample: 18 (60%) Anglo and 12 (40%) African American; average age was 38 and 30 years, respectively. Marital status: 63% married in the forensic sample, 67% married in the clinical sample. Employment: at time of incident, 47% employed full-time in forensic sample; 52% in clinical sample. Education: forensic sample: 82% had high school education or less, and 19% had at least some college or postsecondary education; clinical sample: 63% had high school education or less, and 37% had some college or postsecondary training.

Period of Study: Not stated

Costs: Not stated

Prevalence: All women in the sample had been physically battered. There was a greater prevalence of severe violence, including sexual abuse, among the forensic subsample.

Incidence: Not stated

Mental Health Consequences: Battered women in the forensic sample reported greater levels of PTSD intrusion and avoidance symptoms than the women in the clinical group.

Critique: The authors conclude that compared to clinical battered women, forensic battered women were exposed to more severe types of violence, had lower levels of social support, and higher levels of post-traumatic stress, although when differences in social support and severity of violence were taken into account through the ANCOVA, the groups did not differ on general indicators, although differences on intrusion and avoidance symptoms remained.

The authors acknowledge limitations of the study that preclude exploring differences between the two groups of battered women, such as differences in battered women's cognitions about violence, which may have proven useful for understanding differences between the two groups. The specific characteristics of each group limit the generalizability of the findings to all battered women.

Despite the small sample size and the above limitations that compromise generalizability, the study is a useful beginning for further research that can utilize larger and more varied subsamples of battered women. The authors used instruments with generally high test-retest reliability, and utilized statistical procedures to ensure integrity of the data.

Title of Paper: The Battered Woman Syndrome: Effects of Severity and Intermittency of Abuse

Author(s): Donald G. Dutton, Ph.D. and Susan Painter, Ph.D.

Publication: American Journal of Orthopsychiatry, 63, 1993, 614-622.

Objectives: To study the extent to which trauma symptoms, self-esteem deficits, traumatic bonding, and attachment to the abuser intercorrelate, and how these factors are related to power differentials and **intermittency** of abuse in long-term abusive relationships.

Types of Violence: Domestic violence (physical and emotional wife battering).

Data Sources: Self-administered questionnaires and personal interviews.

Methods: Fifty physically battered women and 25 emotionally abused women recruited from transition houses, treatment programs and newspaper advertisements. "Emotionally abused" meant that they had had fewer than two incidents of physical violence in their relationship. Questionnaires were administered and interviews conducted within six months after the woman had left the abusive relationship and again, six months later.

Measurement: Abuse was measured using the Conflict Tactics Scale and the Psychological Maltreatment of Women Inventory. The Decision Power Index measured women's perception of their own and their abusive partner's power. Other scales used were the Marlowe-Crowne Social Desirability Scale, the Kitson and NiCathy Scales (attachment), the Rosenberg Self-esteem Scale, and the Trauma Symptom Checklist (depression, anxiety, dissociation, hypothesized post-sexual abuse trauma and sleep disturbance).

Sample Size and Demographics: Fifty physically battered and 25 emotionally abused women. Age: $M = 31.4$ years. Other demographic data not stated.

Period of Study: Six months.

Costs: Not stated.

Prevalence: All women were battered either physically or emotionally.

Incidence: Not stated.

Mental Health Consequences: Battered women experienced high rates of trauma symptoms, lowered self-esteem, and heightened paradoxical attachment to the batterer.

Critique: Important demographic data were not stated; for example, race/ethnicity, family size and income level.

Title of Paper: Investigating the Causes and Consequences of Marital Rape

Author(s): Irene Hanson Frieze

Publication: Signs: Journal of Women in Culture and Society, **8**, 1983, 532-553.

Objectives: To define marital rape and explore its determinants and effects from women's perspectives

Types of Violence: Marital rape, physical battering

Data Sources: Structured interview

Methods: Retrospective study using convenience sample of self-identified battered women and a community comparison group. Battered women were recruited from shelters, lists of women filing legal action against battering husband, and direct advertising for research volunteers. The comparison group was formed by matching each of the battered women with a comparable (socioeconomic status, **ethnicity**, and age if possible) woman from the same neighborhood. Women interviewers administered a structured interview. After the interview, the interviewers talked with subjects about their reactions, and gave emotional support, information and referrals if appropriate.

Questions about marital rape were phrased different ways in order to determine what the women themselves defined as marital rape. Open ended questions were coded by trained coders, and multiple coders were used to ensure validity of the data. Factor analysis and multiple regression procedures were conducted.

Measurement: Questions assessed many aspects of the marital relationship, as well as demographic characteristics of wives and husbands, and their reactions to the violence and the rape. Marital rape was operationalized in terms of the wife being forced to have sex, pressured for sex, and rape.

Sample Size and Demographics: 137 self-identified battered women and 137 women in the comparison group. There were slightly more Black women in the battered group (18%) than the battered comparison group (13%) and the nonviolent comparison group (9%). Age: Mean age of battered group was 33 years old, and 42 years old in the comparison group. Each family averaged two children. Wives' income averaged \$3,000-\$6,000 annually.

Period of Study: Not stated

Costs: Not stated

Prevalence: All 137 women in the battered group had been physically abused by their husband. Forty of the 137 comparison women had been physically battered (separated in the analysis into a "battered comparison group).

Battered group: 34% reported being raped, **73%** felt they had been pressured into having sex, 43% reported having sex forced on them. Battered comparison group: 60% felt they had been pressured into having sex. Nonviolent comparison group: 37% felt they had been pressured into having sex. Combined comparison groups: 45% felt pressured. Data indicated that “pressuring” was more likely to involve threats of violence in the battered group than in the comparison group, while it often took more subtle forms of pressure in the nonviolent comparison group.

Incidence: Not stated

Mental Health Consequences: Emotional reactions of women to marital rape: women raped most frequently were those whose emotional reactions turned most to self-blame. In all comparisons between battered women and comparison women, the raped and battered women, who usually experienced the most severe violence, demonstrated more extreme reactions than other battered women who had not been raped. Marital rape victims were more violent to their own children than other battered women.

Critique: Study demonstrates a close association between physical and sexual abuse in marriage, and that husbands who rape were typically more violent within and outside the home. Authors also found that nearly one-third of marital rape victims reported being previously raped as an adult by someone other than their husbands (compared to 8% of women who were not raped), and these victims were more likely to have been raped as adults by family members. The data collected disproves myths and stereotypes of marital rape and its causes. Emotional consequences for the victims not detailed in this article.

Title of Paper: Abused and Nonabused Women: MMPI Profile Differences

Author(s): Murray I. Gellen, Roy A. Hoffman, Margaret Jones, Mary Stone

Publication: The Personnel and Guidance Journal, 62, 1984, 601-604.

Objectives: To study whether battered women would manifest characteristics associated with personality disorders and whether their MMPI profiles would differ from those of non-abused women.

Types of Violence: Domestic violence

Data Sources: MMPI administered to subjects

Methods: Treatment and control groups were formed using convenience samples of women residing at a residential treatment center for "distressed women," and women from the general population (selected using race, age, and socioeconomic criteria for equivalency with the treatment group). The MMPI was administered orally to the subjects, and the scores obtained were *K* corrected. Fisher Exact Probability Test and one-tailed *t* tests were used.

Measurement: 10 clinical scales of the MMPI: Hypochondriasis, Depression, Hysteria, Psychopathic deviancy, Masculinity-femininity, Paranoia, Psychasthenia, Schizophrenia, Hypomania, and Social introversion.

Sample Size and Demographics: 20 women. Age: *M*=31 years (range=19 to 42). Race: African American-2, Hispanic-2, white-16. Women were primarily middle class, and all had been married for more than 6 months.

Period of Study: Not stated

Costs: Not stated

Prevalence: All ten women in the treatment group had been physically battered.

Incidence: Not stated

Mental Health Consequences: Abused women scored significantly higher on eight of the ten scales. Significant differences between the proportion of abused women with high scores and the proportion of nonabused women with high scores were noted on the Hypochondriasis, Depression, and Psychopathic deviancy scales.

Critique: The study focused on the high degree of psychopathic deviancy of battered women without any discussion of whether domestic violence causes the pathology. Authors assert that the women's personality disorders must be treated in conjunction with the

abuse to bring about change in the relationship. Such a perspective omits any accountability of the batterer for his violence. Extremely small sample size compromises any statistically significant findings, and sample selection procedures were not discussed.

Title of Paper: Violence, Battering, and Psychological Distress Among Women

Author(s): Richard J. Gelles and John W. Harrop

Publication: Journal of Interpersonal Violence, 4(4): 400-420, 1989.

Objectives: To interview adults about their experiences of family violence and psychosocial characteristics.

Types of Violence: Domestic violence.

Data Sources: Survey data from women participants in the Second National Family Violence Survey, a sample survey of 6002 U.S. adults.

Methods: Telephone survey. The sample was drawn using random digit dialing and was made up of four parts: a nationally representative sample of 4,032 households; a "state" oversample of 958 households; an oversample of 502 African American households; and an oversample of 510 Latino households. One randomly-chosen individual was interviewed in each household. To be eligible for interviewing, the household had to contain a currently married/cohabiting adult, an adult who had been married or cohabited within 2 years, or a single parent of a child under 18.

Measurement: Domestic violence was measured using the Conflict Tactics Scale (CTS). Psychological distress was measured using the Psychiatric Evaluation Research Interview (PERT) and the Perceived Stress Scale. A marital conflict index consisted of five questions about between-spouse agreement about managing money; cooking, cleaning or repairing the house; social activities and entertaining; affection and sex relations and issues about children. Health was measured by one item on health perceptions.

Sample Size and Demographics: Data were analyzed for the 3,002 women (of 3,522) who were currently married or cohabiting, or had been married or cohabited within 1 year. Demographic characteristics were not stated.

Period of Study: 1985

costs: Not measured.

Prevalence: 11.3% of female respondents experienced minor violence in the previous year. 5% of female respondents experienced severe violence.

Incidence: Not stated.

Mental Health Consequences: Comparisons among women with no, minor, or severe violence in the past year showed that each of 9 of the 10 distress symptoms increased in

prevalence in the past year as severity of violence increased. These include depressive symptoms (“feelings of sadness or depression,” “felt very bad or worthless”), anxiety (“felt nervous or stressed,” “could not cope with all of the things you had to do”), and suicidality (“thought about taking your own life”).

Critique: This is a large, representative survey with oversamples of several under-represented ethnic groups. The measures of violence and psychological distress are well validated. Limitations for assessing mental health consequences are that the PERI does not predict specific mental disorders well, and dates of onset of domestic violence and symptoms were not collected.

Title of Paper: Mental Disorders in Battered Women: An Empirical Study

Author(s): Walter J. Gleason

Publication: Violence and Victims, 8(1), 1993, 53-68

Objectives: To 1) determine the prevalence of mental disorders in two samples of battered women by means of standardized methodology; 2) compare the prevalence of mental disorder in the battered women samples to prevalence of mental disorder in a comparison group of a national random sample of women; 3) compare prevalence of mental disorder in the battered women samples to determine any statistical differences in prevalence of mental disorder

Types of Violence: Domestic violence

Data Sources: Structured interviews, secondary data from the NIMH Epidemiological Catchment Area (ECA) program in the early 1980s.

Methods: Two convenience samples: 1) Women living in a battered women's shelter were interviewed 3-5 days after admission to the shelter; readiness was determined by shelter staff, and; 2) women who were living at home but getting assistance for past abuse (from the agency who ran the shelter), were referred for interviewing by agency staff, interviewed by author.

Measurement: Diagnostic Interview Schedule (263 item structured interview). The DIS was commissioned by the NIMH as the core instrument in the NIMH ECA, an attempt by NIMH to ascertain the incidence and prevalence of mental disorder in the U.S. The DIS contains straightforward questions about existence of psychiatric symptoms and has explicit questions for identifying the presence, duration, and severity of symptoms. Its use is limited to persons 18 years and older, and to adult diagnoses in the DSM-III.

In this study, all prevalence rates for battered women are hierarchy-free (no disorder preempts the diagnosis of another diagnosis). DIS questions related to somatization disorder, anorexia, bulimia, tobacco dependence, pathological gambling, transsexualism, ego-dystonic homosexuality, and organic brain syndrome were not administered to both groups of sampled battered women.

Sample Size and Demographics: 62 battered women. Sample in shelter: N=30. Caucasian-20, African American-7, Hispanic-2, Asian- 1. Age: \bar{x} =29.5, range 19-50. Educational level: 18% some college, 32% high school diploma, 43% some high school, 3% 8 grades of education. Sample from home: n=32. Caucasian-27, African American-3, Hispanic-1, Asian-1. Age: \bar{x} =34.5, range 19-62. Educational level: 56% some college, 16% high school diploma, 25% some high school, 3% 8 grades of education. Women from both samples described themselves as either unskilled or clerical workers. Comparison group in national sample: adjusted to 1980 U.S. Census by an age-sex-race/ethnicity basis.

Period of Study: Not stated.

Costs: Not stated.

Prevalence: All women were battered either physically or emotionally. See tables.

Incidence: Not stated.

Mental Health Consequences: Major finding: battered women in both samples show a significantly higher prevalence of mental disorder than comparison women. Only for social phobia do battered women in shelter have higher prevalence than battered women at home. Battered women at home seem more dysthymic, more obsessive-compulsive, and more likely to abuse alcohol.

Critique: Limited generalizability of findings due to small sample size, and that the battered women are all help-seeking and may be different from battered women who do not seek help from domestic violence agencies. Sample of battered women is not matched for occupation and education with comparison group, and comparison group contains some unidentified battered women. The measurement instrument used to measure mental disorders is based in part on retrospective memories, and there could be errors in the "lifetime" and "6-month" periods.

Title of Paper: Domestic Violence Victims in the Emergency Department

Author(s): Wendy G. Goldberg, RN, MSN and Michael C. Tomlanovich, MD.

Publication: Journal of the American Medical Association, 251, 3259-3264, 1984.

Objectives: The study was conducted to (1) evaluate a more representative population regardless of gender or medical diagnosis, (2) delineate further the battered spouse syndrome, and (3) gather new data useful in formulating therapeutic intervention.

Types of Violence: Spouse battering (violence between partners in an ongoing relationship whether or not they were married).

Data Sources: Medical records and data from self-administered questionnaires of 492 male and female patients, 15 years of age and older, at a general hospital emergency room in Detroit, Michigan.

Methods: Confidential self-administered questionnaires were offered to every tenth person 15 years of age or older who entered the emergency department during the specified time period. For patients who responded "yes" to the operational definition of domestic violence, their emergency department medical records were reviewed and data was collected regarding emergency health care rendered.

Measurement: Questions were designed to measure characteristics of the abusive relationship, services the patient wished to receive while in the emergency department, and community services the patient had used in the past.

Sample Size and Demographics: Size: 107 domestic violence patients; 385 nondomestic violence patients. Age: \bar{x} =32.0 years for domestic violence patients; \bar{x} =38.1 years for nondomestic violence patients. Race: 73% African American/27% white for domestic violence patients; 79% African American/21 % white for nondomestic violence patients. Sex: 38% male/62% female for domestic violence patients; 46% male/54% female for nondomestic violence patients.

Period of Study: June to July 1981 and September to October 1981.

Costs: Not stated.

Prevalence: The percentage of emergency department patients identifying themselves as domestic violence victims was 22% (only 5% of this number were identified as domestic violence victims on the emergency department record). Although the average age of the domestic violence group (32 years) was comparable to other studies, more patients in the older age range were identified in this study than previously. The study did not find a statistically significant difference between the number of male and female domestic violence

victims, although a greater proportion of the victims were female (62%).

Incidence: Not stated.

Mental Health Consequences: Of the domestic violence group, 3% reported psychiatric and emotional needs as their chief complaint when entering the emergency department.

Critique: Study's findings were too generalized, re: differences between male and female respondents reporting of domestic violence. Study groups data on male and female domestic violence victims together, when they should be studied separately (eg., demographic data and questionnaire responses should be listed and analyzed separately by sex). Also, study failed to report on important factors such as family size and sex of partners (were any of the self-identified domestic violence victims in same-sex relationships?)

Title of Paper: Children of Depressed Mothers: Maternal Strain and Symptom Predictors of Dysfunction

Author(s): Constance Hammen, Cheri Adrian, David Gordon, Dorli Burge, Carol Jaenicke, Donald Hiroto

Publication: Journal of Abnormal Psychology, 96, 1987, 190-1 98.

Objectives: To determine whether 1) chronic strains make a contribution to children's psychosocial outcomes separate from those associated with diagnosable psychiatric disorder in parents, and 2) current symptom status in the mother will be associated with negative current outcomes in children

Types of Violence: Not applicable

Data Sources: Face-to-face diagnostic interviews, observation of subjects, self-administered questionnaire, teacher report, school records, telephone diagnostic interview

Methods: A longitudinal study utilizing a convenience sample of mothers with unipolar depression, bipolar disorder, chronic medical illness, or who had no psychiatric disorders. All mothers had at least one child between 8 and 16 years of age. Mothers from the first three groups were recruited from a variety of clinical venues, and were included in the study if they met the research diagnostic criteria for either condition; they entered the study three months after mother's hospital discharge or admission to outpatient treatment. Mothers with early onset diabetes insulin-dependent diabetes and severe arthritis (illnesses that parallel the course of affective disorders) were recruited from specialty practices, newsletters, diabetes registry. Mothers in the medical comparison group included women who experienced significant psychiatric symptoms in reaction to aspects of their medical condition and life circumstances; women with psychiatric disorders that preceded their medical illness were excluded. Normal control group: families were recruited from the same or demographically similar schools as families in the other groups; after a telephone screening, only those reporting no history of significant psychiatric symptoms or treatment were scheduled for further evaluation.

Mothers were first seen alone for a diagnostic interview. Two to four weeks later, mother and child were interviewed and observed together. At six-month intervals, follow-up assessments were conducted on mothers and children, usually by telephone, on diagnostic, life stress, and psychosocial functioning. Mothers and children were interviewed separately about the child. Information on children's academic performance and school behavior were gathered from mothers and children, as well as teacher and school reports of grades, suspensions, special placements, etc.

Comparisons between groups on psychosocial functioning over the follow-up period, and examination of differences between groups of offspring were conducted using analyses of variance and co-variance.

Measurement: Schedule for Affective Disorders and Schizophrenia-Lifetime version (SADS-L) to obtain Research Diagnostic Criteria diagnoses; Beck Depression Inventory; short form of MMPI; Child Behavior Checklist, Kiddie-SADS; Children's Depression Inventory, Conners Teacher Rating Scale.

Sample Size and Demographics: 96 children (46 boys, 50 girls) aged 8-16 years at entry in the study, and followed for up to 3 years. 22 were offspring of 16 mothers with unipolar depression, $\bar{M}_{age} = 12.5$ years; 18 were from 15 mothers with bipolar disorder, $\bar{M} = 13.8$ yrs; 18 were from medically ill mothers, $\bar{M} = 12.11$ yrs; and 38 were from mothers with no history of psychiatric disorder and medical illness, $\bar{M} = 11.9$ yrs. Groups did not differ in mean age of children or by children's sex, nor by mother's education. 69%-93% of mothers had completed at least one year of college. Race: 32% of the unipolar group, 11% of the bipolar group, and 26% of the normal group were Black or Hispanic; the rest of the sample was white. All groups were primarily from in upper socioeconomic strata, no significant difference overall.

Period of Study: Not stated

Costs: Not stated

Prevalence: Not applicable

Incidence: Not applicable

Mental Health Consequences: Not applicable

Critique: This study's findings indicate that maternal disorder, as well as ongoing strains that affect the family's stress level, are predictor of children's outcomes. Strain was seen as arising from external stressors and from the mother's own characteristics and behavior. Authors acknowledge that further study is needed to explore the effects of specific stresses, such as marital discord or children's own stressful events on their level of functioning. One important confounding variable is family violence, which is not examined by this study.

It is unknown if follow-up diagnostic interviews conducted by telephone compromise the quality of the data. Measures had adequate to high reliability. Interviewers had extensive training on use of the instruments, and their ratings and diagnoses were independently confirmed by the Principal Investigator or other clinician.

Title of Paper: Histories of violence in an outpatient population: An exploratory study

Author(s): Judith Lewis Herman, M.D.

Publication: 1986, American Journal of Orthopsychiatry, 56, 137-141.

Objectives: To evaluate the prevalence of violent victimization among psychiatric outpatients.

Types of Violence: Physical and sexual violence (regardless of offender identity).

Data Sources: Chart review.

Methods: Charts of 190 consecutive psychiatric outpatients were reviewed for histories of violence, Axis I and Axis II psychiatric diagnoses, and demographic characteristics.

Measurement: Mention in chart.

Sample Size and Demographics: 190 patients. Gender: 105 women, 85 men. Age: most were 20-39. **Ethnicity:** most were White. Marital status: most were single. Social class: most were working class.

Period of Study: July 1982-June 1984

Costs: Not stated.

Prevalence: 22% of patients reported experiences of violent victimization. Of those, 86% were abused by family members. Of those who had ever been married, 23% of the women had been beaten by their husbands. 13% of the women had been sexually assaulted.

Incidence: Not stated.

Mental Health Consequences: Victimization was associated with borderline personality disorder among women. Women who had been victimized were twice as likely as others to be given a substance abuse diagnosis.

Critique: Strengths of the study include a large patient sample. Limitations include chart review as a detection method (since many incidents of victimization are probably not disclosed and recorded on charts, and since measurement is unsystematic). Mental health consequences of domestic violence are difficult to identify in a population selected for psychiatric disorder.

Title of Paper: Sixty battered women.

Author(s): Elaine Hilberman and Kit Munson

Publication: 1977-78, Victimoloav: An International Journal, 2, 460-470.

Objectives: To evaluate the psychological impact of domestic violence and to address case identification and treatment issues.

Types of Violence: Domestic violence.

Data Sources: Interviews with women patients.

Methods: Women referred by the medical staff of a rural health clinic for psychiatric evaluation were interviewed by the authors. Material about their children was gathered by mothers' reports, pediatric clinic charts, observation, and/or interviews.

Measurement: No systematic measurement reported.

Sample Size and Demographics: 60 women. Age -- range 19-82; most 20-40. Ethnicity -- 66% Black, 33% White. Economic status -- most family had poverty level incomes.

Period of Study: An unspecified 12-month period.

Costs: Not stated.

Prevalence: 50% of women referred were victims of domestic violence.

Incidence: Not assessed.

Mental Health Consequences: More than 50% of the women had past psychiatric histories. 9 women had classic depressive illness, 1 was manic-depressive, 2 were schizophrenic, 4 were alcoholics, and 4 had severed character disorders. 13 women had been hospitalized for violent or psychotic behavior. The great majority of women manifested somatic symptoms, anxiety, insomnia, suicidal behavior, agitation, self-mutilation, or nightmares. Children have many somatic, emotional, behavioral, and sleep problems, with aggressive behavior in boys.

Critique: Strengths include clinician assessment. Limitations include small sample size and unsystematic identification of domestic violence.

Title of Paper: The Assessment of Posttraumatic Stress Disorder in Battered Women

Author(s): Beth J. Houskamp, David W. Foy

Publication: Journal of Interpersonal Violence, 6, 1991, 367-375

Objectives: To compare three PTSD diagnostic methods with regard to their sensitivity and specificity when used to assess women exposed to domestic violence. To prove a hypothesis that the length and severity of exposure to violence will be significantly related to positive PTSD diagnosis.

Types of Violence: Domestic violence

Data Sources: Pen-and-pencil self-administered questionnaire, structured clinical interview

Methods: Retrospective study using a convenience sample of 26 women who had contact with two Los Angeles domestic violence clinics. Women were individually administered the questionnaire. 22 of the women were individually administered a structured interview by the author. Four subjects were not available for the interview.

Measurement: 1) Conflict Tactics Scales-Revised (CTS-R): the physical aggression factor from the CTS-R was utilized, with three additional items added: the number of times a partner forced sex on the other, the number of times a partner used a knife or gun, and the number of times the subject believed her life was in danger. CTS-R also utilized to divide the subjects into high exposure and low exposure groups. 2) Structured Clinical Interview (SCID) used for diagnosing and assessing the severity of current PTSD symptoms according to the DSM-III-R criteria. 3) Symptom Checklist: 47 items assessing a wide range of psychological symptoms. Twenty-three items were characteristic of PTSD according to the DSM-III-R criteria. Severity of symptoms was rated on a 5-point scale. 4) Impact of Event Scale (IES): to assess current PTSD symptoms. In addition to an overall score, the IES contains two reliable subscales to measure "intrusion" or "avoidance" experiences of the subject regarding the traumatic incident. For the SCID and Symptom Checklist, subjects were assessed to be PTSD positive, PTSD partial, or PTSD absent. IES scores were set based on the percentage of PTSD found with the SCID.

Sample Size and Demographics: 26 women who had contact with two domestic violence clinics. Each subject had been involved in a heterosexual relationship that had lasted a minimum duration of six months and had included at least one physically violent incident. Race/Ethnicity: White-73%, Black- 12%, Hispanic- 15%. Seventy percent of the subjects were employed, and 85% had achieved at least high school graduation. On average, women spent 9 years in the battering relationship. At the time of the study, Seventy percent of the subjects had ended the relationship with the battering partner, with 16 months the average length of time since termination. At the time of the study, 20% of the subjects were married.

Period of Study: Six months

Costs: Not stated.

Prevalence: 43% of subjects were rated as having diagnosable PTSD on the Symptom Checklist, and 45% of the subjects on the SCID.

Incidence: Not stated

Mental Health Consequences: Extent and severity of exposure to violence were found to be significantly related to the severity of PTSD symptoms experienced.

Critique: Authors assert that the results of the study suggest that a large percentage of women victimized by domestic violence may experience PTSD as diagnosed by DSM-III-R criteria; this finding is supported by the use of the questionnaire and clinical interview and their concordance in the PTSD assessment. Data supported the hypothesis of significant relationship between intensity of violence and severity of PTSD symptoms.

The study suggests important findings regarding assessment and prevalence of PTSD in domestic violence victims, but is limited by the sample size and the data collection methods. The small sample size compromises the generalizability of the findings. Attrition and self-selection issues also are shortcomings in the study. Nearly one-third of the original group of women who volunteered for the study dropped out after the initial contact. No data on this group is available to explore potential bias. Also, no explanation is given as to the reasons why four of the subjects—approximately 15% of the 26 women—were not available for the clinical interview, and no data is reported about their characteristics, which also may suggest potential bias. Reported demographic characteristics of the sample did not include age nor income, nor did authors explore relationship concerning the length of time elapsed between the violence and time of the study, and PTSD symptoms.

Despite these shortcomings, the study is valuable in that it raises specific suggestions for future research. The authors do acknowledge study's limitations and make numerous recommendations for future research that address these limitations.

Title of Paper: Psychological Functioning of Children in a Battered Women's Shelter: A Preliminary Investigation

Author(s): Honore M. Hughes, Susan J. Barad

Publication: American Journal of Orthopsychiatry, 53, 1983, 525-531.

Objectives: To determine whether family violence and disruption adversely affect children's psychological functioning.

Types of Violence: Domestic violence (wife battering)

Data Sources: Self-administered questionnaire and questionnaire administered to children

Methods: Two longitudinal projects using convenience samples of battered women and their children residing at a battered women's shelter. Children who met the following selection criteria were included in the study: aged 3-13 years, residency at shelter exceeded 3 days, no or one brief previous stay, both mother and child consented to participation. Three to five days after entering the shelter, children were individually administered self-report measures by a graduate student. Behavior checklists were collected from the child's mother, a staff member, and occasionally, the child's teacher.

Two samples were drawn for two different 9-month periods, and both were divided into subgroups based on age/grade, since different measures were used to assess preschool, younger school-age (grades 1-3), and older school-age (grades 4-7) children. Sample 1 represented 37.1% of the children population during the 9-month period, and Sample 2 represented 28.9%.

Unweighted means analysis of variance for unequal groups (ANOVAs) and two-tailed t-tests were utilized. Normative data were selected from available sources.

Measurement: Behavior Problem Checklist (BPC for school-age children, PBPC modification for preschool children), Piers-Harris Children's Self-Concept Scale, McDaniel-Piers Young Children's Self-Concept Scale, Maryland Pre-School Self-Concept Scale, What I Think and Feel Scale.

Sample Size and Demographics: Sample 1: 39 children, 17 girls, 22 boys. Age: 18 preschoolers, M=4.5 years old; 9 young school-age, M=7.3 years; older school-age, M=10.10 years. Sample 2: 26 children, 13 girls, 13 boys. Age: 9 preschoolers, M=4.5 years; 10 young school-age, M=8.8 years; 7 older school-age, M=11.5 years. Both samples' families were primarily of low socioeconomic status.

Period of Study: July 1979-May 1980, Sept. 1980-May 1981.

Costs: Not stated

Prevalence: Not stated

Incidence: Not stated

Mental Health Consequences: Younger school-age children scored lower than average, and preschoolers scored well below average, on self-esteem measures. School-age boys were rated as more aggressive than girls by mothers and staff.

Critique: Small sample with incomplete demographic information. Authors acknowledge that complete data sets could not be obtained for all children, reducing group size for some statistical analyses. Within-rater and between-rater differences found for behavior checklists, and authors found that mothers tended to rate their children more negatively than did other observers, reasons are unclear. This study does not consider possible confounding variables such as previous intervention, alcohol or drug abuse, severity of violence, and, most importantly, whether children themselves were battered.

Title of Paper: Emotional and Physical Health Problems of Battered Women

Author(s): Peter Jaffe, Ph.D., David A. Wolfe, Ph.D., Susan Wilson, M.A., and Lydia Zak, B.A.

Publication: Canadian Journal of Psychiatry, 31, 1986, 625-629.

Objectives: To identify common mental health problems reported among battered women in a non-clinical population; to investigate correlates of these symptoms; and to apply this information to the assessment of women who have been battered.

Types of Violence: Domestic violence (wife battering).

Data Sources: Questionnaire

Methods: Psychosocial data of battered women were compared to those of a control group. Participants were individually administered a structured interview to obtain a history of the family, and four psychometric instruments to assess maternal and child adjustment, life events, and family conflict.

Measurement: The General Health Questionnaire to assess emotional and physical health; the Life Experiences Survey to assess number of negative life events in the previous 12 months; and the Achenbach Child Behavior Profile to assess women's observations of their children's behavior.

Sample Size and Demographics: 56 residents in battered women shelters in Southwestern Ontario, Canada; 89 nonbattered women. Age: Not stated. Yearly family income: \$14,148 for battered women; \$12,641 for nonbattered women. Mean number of children in family: 2.6 for battered women; 2.3 for nonbattered women. Mean age of children: 8.9 for battered women; 8.4 for nonbattered women.

Period of Study: Not stated.

Costs: Not stated.

Prevalence: Not applicable.

Incidence: Not stated.

Mental Health Consequences: Battered women had more somatic complaints (more than twice as many as nonbattered women), a higher level of anxiety and insomnia (nearly 2.5 times nonbattered women), and more depression symptoms (three times nonbattered women).

Critique: No time period was given for the study.

Title of Paper: Incidence and Correlates of Post-traumatic Stress Disorder in Battered Women: Shelter and Community Samples

Author(s): Anita Kemp, Bonnie L. Green, Christine Hovanitz, and Edna I. Rawlings

Publication: Journal of Interpersonal Violence, 10:43-55, 1995.

Objectives: To identify characteristics of battery the social environment in which it occurs with posttraumatic stress disorder (PTSD).

Types of Violence: Domestic violence, verbal abuse, childhood physical and sexual abuse history, prior adulthood sexual abuse, sexual assault by partner.

Data Sources: Questionnaire study of 179 battered women and 48 non-battered, verbally abused women. Participants were recruited from shelters, battered women's support groups, therapist referrals, and newspaper advertisements.

Methods: Not stated.

Measurement: PTSD was measured using the Mississippi Scale for PTSD (MPTSD) and the PTSD Self-Report Scale (PTSDR). Degree of domestic violence was measured using the Conflict Tactics Scale, Form R (CTS).

Sample Size and Demographics: 227 women. **Age:** The modal age category for both battered and non-battered groups was 21-30. **Race:** battered women: European American--82%, African American--14%, others not stated; non-battered, verbally abused women: European American--85%, African American, 10%, others not stated.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: Not applicable.

Incidence: Not applicable.

Mental Health Consequences: Using the PTSDSR, 8 1% of battered women and 63% of non-battered, verbally abused women met PTSD criteria. Using the MPTSD with a cutoff score of 107, the corresponding rates were 43% and 21%.

Critique: Although recruitment methods moved beyond clinical studies to sample non-help-seeking populations, it is unclear whom the results generalize to. A strength of the study is the use of multiple, well-validated measures.

Title of Paper: Post-Traumatic Stress Disorder (PTSD) in Battered Women: A Shelter Sample

Author(s): Anita Kemp, Edna I. Rawlings, Bonnie L. Green

Publication: Journal of Traumatic Stress, 4, 1991, 137-148.

Objectives: To study the presence or absence of post-traumatic stress disorder (PTSD) in residents of battered women's shelters.

Types of Violence: Domestic violence

Data Sources: Self-administered questionnaire, structured clinical interview

Methods: Retrospective study using a convenience sample of 77 self-selected battered women residing at battered women's shelters. Residents were presented with the general research topic by the investigator and volunteers were requested. Subjects completed the self-report measures on their third, fourth, or fifth day at the shelter. Twenty subjects were given the structured interview by the investigator, after they completed the self-report questionnaire. (The PTSD items in a self-report questionnaire were the same in the Interview Schedule, allowing for the comparison of the self-report responses with the interview responses for a subset of the sample.) Descriptive statistics used to determine correlations among variables.

Measurement: Impact of Event Scale, Symptom Checklist (SCL-90-R), Cincinnati Traumatic Stress Study Center's Interview Schedule for Post-Traumatic Stress Disorder, Demographic Questionnaire designed by the investigator.

Sample Size and Demographics: 77 physically battered women. Age: M=30.4 (range 18-61). Race: White-62.3%, Black-36.4%. Education: 72.7% at least completed high school. 66.2% experienced at least one incident of prior physical or sexual abuse as an adult or as a child.

Period of Study: Not stated

Costs: Not stated

Prevalence: All women in the sample had been physically battered.

Incidence: Not stated

Mental Health Consequences: 65 (84.4%) of the sample met the DSM-III-R diagnostic criteria for PTSD. Depression, anxiety, and psychopathology were correlated with PTSD.

Critique: The authors conclude that PTSD is a probable diagnosis for this sample of battered women, and assert that the trauma of battery should be a central area for therapy with physically abused women. The PTSD conceptualization is a simple and direct one with implications for helping the battered woman understand the effects of trauma, by helping to remove some of the self-blame by placing her psychological experiences within external experiences.

Study has limited generalizability since the sample was a self-selected shelter group, and the study's results cannot be viewed as definitely applicable to battered women not in shelters. However this study demonstrates that battered women are at risk for psychological problems, as battering is related especially to PTSD, depression, anxiety, and general psychopathology. Study also shows prevalence of childhood experiences of abuse among adult battered women.

Title of Paper: Dimensions of Health in Violent Families

Author(s): Suzanne K rouac, Marie-Elizabeth Taggart, Joelle Lescop, Marie-Fabienne Fortin

Publication: Health Care for Women International, 7, 1986, 413-426

Objectives: To draw a comprehensive health profile (biological, psychological, social) of women and children who are victims of family violence

Types of Violence: Domestic violence (including child abuse)

Data Sources: Semi-structured questionnaire, secondary data on general population

Methods: Convenience sample of women at eight battered women's shelters in the Montreal area were interviewed. Data collected on women's perceptions of their own health and that of their children.

Measurement: Women's health: Biological aspect investigated with these variables: life habits (diet, sleep patterns, medication), preventive measures (visits to physician, dentist), and identifying acute or chronic health problems. Psychological dimension: anxiety, depression, somatization. Social aspect: presence of social relationships and use of social network by women, work and leisure activities. Psychological variables measured with three categories of the Symptom Checklist developed by Derogatis.
Children's health: health problems, living habits, preventive measures, child's behavior in the family and at school, relationships with other people (parents, siblings, friends).

Sample Size and Demographics: 130 women who had been assaulted and sought help at a battered women's shelter. Age: $\bar{x}=30.5$, range 19-44. Educational level: elementary- 13.2%, Secondary-47.3%, Post-secondary-39.5%. Occupations: housewife-78.5%, worker-17.7%, student/unemployed-3.8%. Children/family $\bar{x}=2$. Children: male-58.5%, female-41.5%. Age: $\bar{x}=6.5$ years.

Period of Study: 9 months

Costs: Not stated.

Prevalence: Type of violence against mothers: verbal and physical-40.8%; verbal, physical, and other (eg, throwing objects)-40%. Frequency of violence: 20.4% battered five or more times within last 3 months. 75% verbally threatened regularly. Injuries: one-third of women had bruises, cuts, bone fractures.
Type of violence against children: 75% of assaults witnessed by children. 63% of children are not battered in the incident. During last 5 years, 57.1% of children are verbally

abused by male spouse. Fathers/male spouses/mothers commit 82.2% of physical, and 76.9% of verbal abuse against the children. Injuries: on 8% of the children, bruises, bone fractures of wrist, shoulder, head.

Incidence: Not stated

Mental Health Consequences: Sample women had higher levels of anxiety, depression, somatization than comparable group of Quebec women taken from general population. Differences for anxiety and depression were statistically significant at $p < .05$. Sample women had restricted social network, and also reported heavy tobacco use and drug abuse. Mothers had notices changes in children's behavior in last 3 months: nervousness 5 1.6%, sadness-48.4%, unhappiness-28.4%; some problems in relating to their peers, to other family members and other adults (39.7%). Symptoms of anxiety and depression reported by mothers correspond to similar behavioral problems in their children.

Critique: Limited number of subjects, no control group, use of subjective measures. Researchers describe the high stress and difficulty of conducting the interviews, and impossibility of objective physical measures. The high stress of the subjects could likely bias responses to the questionnaire especially regarding the higher levels of depression. No causal link between family violence and victims' health can be established.

Authors regard health in global way, suggest health data collection to be designed to also determine extent and distribution of unmet needs relating to individual and group development. New ways of providing health intervention are needed.

Title of Paper: MMPI-2 Profiles of Battered Women in Transition

Author(s): Fariha I. Khan, Toni L. Welch, Eric A. Zillmer

Publication: Journal of Personality Assessment, 60, 1993, 100-111.

Objectives: To examine the psychological functioning of battered women as it relates to length and type of abuse, in order to understand the complex interaction between symptoms of violence and symptoms of mental illness.

Types of Violence: Domestic violence

Data Sources: Self-administered questionnaire

Methods: A convenience sample of women residing at a battered women's shelter. Over the study period, 100 residents were asked to participate on a voluntary basis; 31 who met MMPI-2 administration criteria completed the protocol. Subjects completed the MMPI-2 and a questionnaire. *K* corrected MMPI Scale T-scores were computed for each subject's MMPI profile, including validity scales, clinical scales, and supplementary scales. Two regression analyses were computed.

Measurement: MMPI-2, and a questionnaire, based on the shelter intake form, that asked respondents about the length and types of psychological and physical abuse.

Sample Size and Demographics: 31 battered women. Age: $M=30.2$ years ($SD=6.2$, range=19 to 44). Education: $M=11.6$ years ($SD=2.2$, range=8 to 16). Average number of children = 2.4. 74% reported that they were intimately related to and lived with their abuser before-coming to the shelter.

Period of Study: 18 months

Costs: Not stated

Prevalence: All women had been physically and psychologically battered.

Incidence: Not stated

Mental Health Consequences: 90% of the sample manifested elevated profiles on the MMPI-2 scales 4, 6, 8, and 9, with corresponding low scores on scale K. At least 29% were at risk for alcohol or substance abuse.

Critique: Authors caution that many battered women are misdiagnosed with mental illness, but that the pathology on the MMPI may be related to violence. MMPI elevations are to a degree reactive states rather than character traits, confirmed in their

regression analysis. Findings are limited due to low response rate (30%), and lack of information on the residents who did not participate raises questions of selection bias. Demographic data was incomplete. Severity of abuse scale was not standardized. The study shows that battered women present with varying degrees of psychological problems, and require mental health intervention as well as safety measures.

Title of Paper: The Continuum of Violence Against Women: Psychological and Physical Consequences

Author(s): Marjorie Whittaker Leidig, Ph.D.

Publication: College Health, 40: 149- 155, 1992.

Objectives: To raise awareness of college health practitioners of the spectrum of violence against women.

Types of Violence: Street hassling, grabbing, obscene telephone calls, voyeurism, exposure, lesbian baiting, prostitution, pornography, medical violence, sexual harassment, abuse by professionals, rape, domestic violence, incest.

Data Sources: Psychological, psychiatric, medical, and popular literature.

Methods: Literature review.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not measured.

Prevalence: Cites another review indicating that 24% of women are raped in their lifetimes, 31% experience attempted rape, and 20% to 30% have an unwanted childhood sexual encounter with an adult male.

Incidence: Not stated.

Mental Health Consequences: Literature is reviewed suggesting that depression, borderline personality disorder, multiple personality disorder, and post-traumatic stress disorder are related to violence against women.

Critique: This is a selective literature review that attempts to integrate the psychological and physical health consequences of all forms of violence against women. Because it does not disaggregate these, the role of domestic violence specifically is unclear.

Title of Paper: The "Battering Syndrome": Prevalence and Clinical Characteristics of Domestic Violence in Primary Care Internal Medicine Practices

Author(s): Jeanne McCauley, David E. Kern, Ken Kolodner, Laurie Dill, Arthur F. Schroeder, Hallie K. DeChant, Janice Ryden, Eric B. Bass, Len R. Derogatis

Publication: Annals of Internal Medicine, 123, 15 November 1995, 737-746.

Objectives: To determine the prevalence of domestic violence among female patients and to identify clinical characteristics that are associated with current domestic abuse

Types of Violence: Physical and sexual abuse

Data Sources: Self-administered questionnaire

Methods: Cross-sectional, retrospective study using a convenience sample of adult female patients at four community-based primary care internal medicine practices. Office nurses determined patients' eligibility, based on the ability to read and complete a questionnaire by oneself. A procedure was implemented to ensure that patients were surveyed only once. Recruitment of eligible patients was done in the examining rooms to ensure privacy. Patients completed the survey while awaiting the physician, and placed surveys in a box to ensure anonymity and privacy of responses. 81.6% of recruited patients completed the questionnaire.

All statistical tests conducted at a two-tailed, 5% level of significance. Chi square tests, t-tests, preference ratios, and logistic regression utilized.

Measurement: Current domestic violence was measured by a modification of the Abuse Assessment Screen. CAGE questions assessed current and past alcohol abuse. Symptom Checklist (SCL-22) to measure anxiety, depression, somatization, and self-esteem. Other items on the questionnaire included: demographic characteristics, physical symptoms, psychiatric history, use of street drugs, use of current medication, and medical history.

Sample Size and Demographics: Total sample: 1952 female patients. For demographic and clinical analysis, sample was 1826 due to nature of the responses; totals vary due to some nonresponse. Age: 18-25 yrs=161, 26-35 yrs=351, 36-45 yrs=429, 46 yrs=798. Marital status: single=304, married=1 062, separated/divorced=262, widowed=175. Annual family income: ≤ \$9999 =181, \$10,000-\$19,999 = 298, \$20,000-\$29,999 = 308, \$30,000-\$39,999 = 270, \$40,000-\$49,999 = 232, \$50,000 or more=243, missing=294. Education: some high school-374, high school grad-860, some college-368, college grad or postgraduate- 136. Race: white- 1502 (82%), African American- 16.7%.

Period of Study: February to July 1993

Costs: Not stated

Prevalence: Lifetime prevalence: 21.4% of respondents (418) were physically or sexually abused; 22% (429) had been physically or sexually abused before age 18; 32.7% (639) had been physically or sexually abused as an adult of child. Of the 429 patients who had been abused before age 18, 308 had been sexually abused.

Previous year: 5.5% (108) experienced domestic violence; of them, 49% (53) had also been abused before 18 years old. Approximately half of this group experienced high-severity abuse.

Incidence: Not stated

Mental Health Consequences: Currently abused women have higher mean subscores on SCL-22 for anxiety, depression, somatization, low self-esteem than nonabused patients. Currently abused patients more likely to report substance abuse by themselves or their partners, attempted suicide, and eating disorders.

Critique: Survey instrument was developed by an interdisciplinary team with expertise in research, biostatistics, and domestic violence. Instrument was relatively short and designed for individuals with moderate reading skills. Measures were demonstrated to have adequate to high validity. Authors findings of prevalence of domestic violence may be conservative due to the study's definition of it as a direct physical assault, but authors suggest that older age and higher socioeconomic status of patients contribute to the low rate, however further study is needed. High response rate of patients who were deemed eligible and recruited by staff, but overall data collection was inconsistent due to the lack of recruitment on busy days, and no information is available on nonrespondents; possible selection bias may exist.

Title of Paper: Coping with Domestic Violence: Social Support and Psychological Health Among Battered Women

Author(s): Roger E. Mitchell, Christine A. Hodson

Publication: American Journal of Community Psychology, 2, 1983, 629-654.

Objectives: To study the impact of stress, personal resources, social support, institutional responsiveness and coping upon the psychological health of battered women.

Types of Violence: Domestic violence

Data Sources: Administered questionnaire

Methods: A convenience sample of 60 women admitted to a battered women's shelter, who had been physically assaulted at least twice by an intimate male partner. A questionnaire packet was administered to each woman within one week after their arrival at the shelter. 81% of the women asked to participate agreed to do so. Descriptive statistics were used to test for correlations among variables.

Measurement: The questionnaire packet contained measures of stress, personal resources, social support, institutional response, coping and adjustment. Conflict Tactics Scale, the Duncan Index of Socioeconomic Status, method-of-coping categories developed by Billings & Moos, Brief Symptom Inventory, Pearlin and Schooler scale for assessing women's sense of self and mastery of their lives, Rosenberg Self-Esteem Scale.

Sample Size and Demographics: 60 physically battered women. Age: M=27.4 years. Race: 48% Caucasian, 44% African American, 8% other. Education: 33% completed some high school, 32% completed high school, 35% obtained at least some post high school training. Income: 68% earned \$4,000 or less, while most of the male partners earned \$12,000 or more. At the time of the study, subjects who were mothers had a mean of 2.1 children living in their homes; six women had no children. 31 women were married to their assailant, and all but 5 were living with the batterer before coming to the sample.

Period of Study: Not stated

Costs: Not stated

Prevalence: All women in the sample had been physically assaulted at least twice by an intimate male partner

Incidence: Not stated

Mental Health Consequences: High levels of depression and low self-esteem. Increased

frequency and severity of violence were strongly related to severe depression and lowered self-esteem. Women with greater personal resources, more supportive responses from formal or informal sources of help, and less avoidant-coping styles were more likely to show psychological health.

Critique: The study establishes a model to explore battered women's coping within a non-victim-blaming perspective. The authors identify unanswered questions regarding the impact of domestic violence on women and the factors that might mediate its effects, and formulate a stress-support-coping model to explore how stress, these mediating factors, and adjustment interact. The authors draw extensively from the domestic violence literature to formulate a model and design their questionnaire, and used a variety of instruments with generally high test-retest reliability.

The authors acknowledge limitations of the study: the cross-sectional design leaves room for alternative explanations of the findings, especially regarding how the severity of depression and support factors may mutually influence each other. Also, the self-selected sample limits generalizability, although this study did have a significant percentage of women of color.

Title of Paper: Marital Rape

Author(s): Mildred Daley Pagelow

Publication: In Handbook of Family Violence, V. B. Van Hasselt, R. L. Morrison, A. S. Bellack, M. Hersen, (Eds.), 1988, New York: Praeger, 207-232.

Objectives: To describe the phenomenon of rape in marriage by exploring its context and consequences.

Types of Violence: Rape in marriage, battering, physical and sexual assault

Data Sources: Family violence and sexual assault (including rape in marriage) literature

Methods: Literature review

Measurement: Not applicable

Sample Size and Demographics: Not applicable

Period of Study: Not applicable

Costs: Not applicable

Prevalence: Studies found that between 14% of a large random sample (Russell, 1982) and 38% of a convenience sample of ever-married or cohabiting women (Hanneke et al., 1985) reported rape by their husband or intimate partner. Marital rape was reported by 46% of a convenience sample of wives of violent men (Shields & Hanneke, 1983).

Incidence: Not stated

Mental Health Consequences: Trauma is severe and long-lasting. Victims report lower self-esteem, more psychosomatic reactions, attempted suicide. One study found that the number of reactions increases significantly during victimization and continues to increase even after the relationship has ended (Shields & Hanneke, 1983). Raped wives suffer from rape crisis syndrome, presenting symptoms of humiliation, shame, disjointedness, anger, inability to concentrate or express themselves, and withdrawal.

Critique: This is a descriptive article that addresses rape in marriage in historical and contemporary societal and legal contexts. The author conducts a review of the literature on rape in marriage and explores the factors that promote marital rape. Assessment and treatment, ethical and legal issues, and future directions for addressing the issue are discussed.

Title of Paper: Spouse or partner abuse, use of health services, and unmet need for medical care in U.S. women

Author(s): Stacey B. Plichta, Sc.D. and Carol S. Weisman, Ph.D.

Publication: 1995, Journal of Women's Health, 4, 45-53.

Objectives: To examine the relationship of spouse or partner abuse to the use of health services and to unmet need for health care in a representative sample of U.S. women.

Types of Violence: Domestic violence.

Data Sources: Sample survey.

Methods: Analysis of data from the Women's Health Survey, a national telephone survey of women conducted by Louis Harris and Associates for the Commonwealth Fund. Only data from women under 65 and were cohabiting or married at the time of the survey.

Measurement: Conflict Tactics Scale; Burnam et al. (1988) depression screening measure; number of physicians seen, number of physician visits made, whether the woman "needed medical care but did not get it." Rosenberg Self-Esteem Scale. Health perception item, disability, self-reported chronic conditions, self-reports of anxiety or depression diagnosis.

Sample Size and Demographics: 1,324 women.-- **Age:** 18-24--10.2%, 25-44--56.3%, 45-64--33.5%. **Ethnic background:** White or other (of these, 97.5% White)--93.2%, Latina--7.8%, African American--8.9%. **Education:** less than high school--15.5%, high school--40%, post-high school--19.1%, college graduate/postgraduate degree--25.4%. **Marital status:** married--91.2%, cohabiting--8.8%. **Children in household:** 0--42.6%, 1+--57.4%. **Income:** less than \$15,000--14.4%, \$15,000-25,000 -- 34.2%, \$25,000 or more--51.5%.

Period of Study: February-March, 1993

Costs: Not stated, but use of health services was measured. Of abused women, 32.7% reported that the hospital emergency room was their regular source of care, and 7.4% had no or other regular source of medical care. 14.9% of abused women had no medical insurance, and 17.3% had Medicaid or Medicare. Abused women saw a mean of 2.09 physicians in the past year (s.d. = 1.63) and made a mean of 7.44 physician visits (s.d. = 10.54). 37.6% reported unmet need for care in the past year.

Prevalence: 8.4% were physically abused by their spouse or partner in the past year.

Incidence: Not stated.

Mental Health Consequences: Women who reported anxiety/depression diagnosis in the past 5 years were more likely to report domestic violence than those without this diagnosis (17.4% vs. 6.8%), women who reported high depressive symptoms were more likely to report domestic violence than those reporting low depressive symptoms (16.5% vs. 3.5%), women who reported recent suicidal thoughts were more likely than those who did not to report violence (21.2% vs. 7.7%).

Critique: Strengths include a large, representative sample of women and well-validated measures. The main limitation for the present purpose is the way data are reported; e.g., prevalence of depressive symptoms among abused vs. non-abused women cannot be determined.

Title of Paper: The Incidence of Wife Abuse and Mental Health Status in Abused Wives in Edmonton, Alberta

Author(s): Pamela A. Ratner, R.N., M.N.

Publication: Canadian Journal of Public Health 84:246-249, 1993.

Objectives: To estimate the prevalence of wife abuse and its mental health correlates.

Types of Violence: Domestic violence, psychological abuse.

Data Sources: Sample survey of 406 women who were married or cohabiting or who had been married or cohabited within the past year, and were 18 or older and resided in Edmonton, Alberta, Canada.

Methods: Telephone survey.

Measurement: The Conflict Tactics Scale (CTS) was used to measure violence. The General Health Questionnaire (GHQ) was used to assess mental health status. The CAGE was used to screen for alcoholism.

Sample Size and Demographics: 406 women. **Age:** $M = 39.4$ years, $s.d. = 14.3$, range 18-82; 18-34--49%, 35-44--20%, 45-64--24%, 65 and over--7%. **Marital status:** married -- 82%, cohabiting-- 13%, formerly married--4%. **Employment status:** employed full time-- 41%, employed part time--21%, unemployed-- 1%, retired-- 13%, student--3%, disabled-- 1%. **Education:** less than 8th grade--2%, 8-10 years--11%, 11-12 years--40%, some college--33%, bachelor's degree--12%, post-bachelor's degree--3%. **Individual income:** under \$10,000--38%, \$10,000-19,999--25%, \$20,000-29,999--16%, \$30,000 or more--12%. **Household income:** under \$20,000--10%, \$20,000-29,999--16%, \$30,000-49,999--36%, \$50,000 or more--25%.

Period of Study: Not stated.

Costs: Not measured.

Prevalence: 10.6% reported physical abuse (domestic violence) during the previous year. An additional 13.1% reported psychological abuse. 93% of physically abused women were also psychologically abused.

Incidence: Not measured.

Mental Health Consequences: Mean GHQ total scores and mean subscale scores on somatic complaints, anxiety and insomnia, social dysfunction, and depression were higher for

physically abused women than non-abused women. Physical abuse was associated with GHQ total score over and above effects of age, household income, and psychological abuse. 16.3% of physically abused women and 11.3% of psychologically-abused women met CAGE criteria for alcohol dependence, compared to 2.4% of non-abused women.

Critique: Although the sample was relatively small, well-validated instruments were used and analyses established association of domestic violence with mental health problems that was independent of both demographic characteristics and psychological abuse. The GHQ does not measure diagnosable mental disorders, and lack of information on age of onset of symptoms and abuse precludes inferences about causal direction.

Title of Paper: A Comparison Between Strategies Used on Prisoners of War and Battered Wives

Author(s): Mary Romero

Publication: Sex Roles, 13, 1985, 537-547

Objectives: To compare strategies used on prisoners of war (POWs) and battered wives to explore whether battering tactics are gender-specific and thus a result of sexism, or if battering is a reflection of societal violence

Types of Violence: Domestic violence, psychological & physical abuse of POWs

Data Sources: Review of literature on family violence and American POW internment during the Korean war

Methods: Literature review

Measurement: Not applicable

Sample Size and Demographics: Not applicable

Period of Study: Not applicable

Costs: Not stated

Prevalence: Not applicable

Incidence: Not applicable

Mental Health Consequences: Psychological abuse, emotional dependency, and isolation from a support system can destroy POWs' and battered women's self-identity and caused anxiety, depression, insomnia, apathy, withdrawal, and suicide. However, it is demonstrated that these effects for both groups are reversible.

Critique: This article is very important to identify the systematic strategy of domination in domestic violence, accomplished by a well-documented comparison of the ways that captors and batterers develop and maintain psychological and physical dominance over their victims. Author explores domestic violence as a social control device that serves to maintain unequal power relationships, and concludes that the strategies used in domestic violence are not gender-specific but used to maintain gender stratification and male domination in a society that legitimates both.

Similarities and differences between the experiences of POWs and battered women are discussed. The situational context and the aggressors' relationships to their

victims are markedly different, but the author is able to demonstrate consistent similarities in strategies of how both captors and batterers attempt to establish social control **through** psychological and physical coercion. The response of society to each group is related to their different positions in society; the author describes society's markedly different perception of wartime abuse of POWs and of domestic violence, which is often perceived as normal conflict between husband and wife.

The author contends that as long as a sexist society continues to legitimate men's domination over women, domestic violence will not be viewed as a function of unequal power relations. Given the similarities of coercive techniques, battered women need "deprogramming" as much as POWs for their healing and recovery.

Title of Paper: Battered women: A medical problem requiring detection

Author(s): Bruce Rounsaville, M.D., and Myrna M. Weissman, Ph.D.

Publication: 1977-78, International Journal of Psychiatry in Medicine, 8, 191-202.

Objectives: To document the prevalence and seriousness of domestic violence in patients, and to emphasize general physicians' role in treatment.

Types of Violence: Domestic violence (physical abuse).

Data Sources: Patients in the surgical and psychiatric services of a hospital emergency room. Clinicians were instructed to identify cases by asking the woman whether injuries they had had been inflicted deliberately by a male partner.

Methods: Identified battered women were offered immediate psychiatric consultation and offered free follow-up treatment at an adjacent mental health service.

Measurement: Open-ended and structured interviews, and Center for Epidemiologic Studies Depression scale.

Sample Size and Demographics: 37 women. Age: 25 or younger--46%, 26-35--30%, 36-55--24%. Marital status: married--35%, separated or divorced--30%, single--30%. Social class: I and II--33%, III--31%, IV--36%. Ethnicity: White--67%, Black--33%. Religion: Catholic--46%, other--54%. Number of children: 0--37%, 1-2--33%, 3 or more--30%.

Period of Study: Unspecified one-month period.

Costs: Not stated.

Prevalence: These women represented 3.8% of women presenting to the surgical and 3.4% presenting to the psychiatric emergency services.

Incidence: Not stated.

Mental Health Consequences: Depression scores on CES-D: asymptomatic (0-15)--20%, mild to moderate (16-32) -- 60%, severe (33+)--20%. Using a diagnostic measure, 52% had notable symptoms of depression. 37% were diagnosed with depressive neurosis, 6% with psychotic depression, and 10% with depression with alcohol abuse. 12% were schizophrenic. 6% were drug abusers. 29% had no psychiatric diagnosis.

Critique: Strengths of the study include clinical diagnosis, well-validated depression measure, and specific instructions to clinicians to assess domestic violence. Limitations include a small sample size.

Title of Paper: Correlates of Depressive Symptoms Among Battered Women

Author(s): Robin A. Sato and Elaine M. Heiby

Publication: Journal of Family Violence, 7(3),1992.

Objectives: To evaluate the prevalence and correlates of depressive symptoms among battered.

Types of Violence: Domestic violence.

Data Sources: Questionnaire study of 136 women from battered women's groups and shelters, who reported at least one episode of physical violence by their partner within a one-year period.

Methods: Participants completed the questionnaire at their respective treatment sites before beginning treatment.

Measurement: Depression was measured using the Zung Self-Rating Depression Scale (SDS) was used. Domestic violence was measured by the Conflict Tactics Scale, Form N.

Sample Size and Demographics: 136 battered women. **Age:** $M = 31$, s.d.= 8.6. **Race:** Hawaiian or part-Hawaiian--35%, European American--25%, Mixed, other than Hawaiian--15%, Japanese--7%, Filipino--4%, African american--2%, Samoan--2%, Chinese--1%, other--8%. **Marital status:** Married--65%, separated--30% [sic]. **Household status:** Has children--90%.

Period of Study: Not stated. (Women were eligible if they reported domestic violence during a one-year period 1987-88).

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: Mean depression score was 48, mode was 50. 47% met criteria for clinical depression according to Zung's criteria (SDS ≥ 50).

Critique: The sample was relatively large for a clinical sample. The measure of depression was well-validated. However, **representativeness** of the sample is unclear, and causal direction cannot be inferred.

Title of Paper: Posttraumatic Stress Symptom Profiles of Battered Women: A Comparison of Survivors in Two Settings

Author(s): Daniel G. Saunders

Publication: Violence and Victims, 9(1), 1994, 3 1-44

Objectives: To 1) develop a profile of Posttraumatic Stress Symptoms experienced by battered women and to explore differences among two subsamples, and 2) prove the hypothesis that battered women seeking help at a domestic violence program will have more frequent symptoms of PTSD and that these symptoms can be explained by the frequency and severity of the violence they experienced.

Types of Violence: Domestic violence

Data Sources: Self-administered questionnaire

Methods: Retrospective study using a convenience sample of domestic violence survivors who were recruited from 18 shelter programs, a victim support program of a prosecutor's office, newspaper, and a male batterer's program (women partners). Questionnaires were sent to shelters and flyers and letters were sent to women recruited through the other venues. Women in shelters were given the questionnaires by a staff member, and women recruited through other sources were administered the questionnaire by the project director or a research assistant. These women were given emotional support and referrals as needed after completing the questionnaire. Data analysis used *t* tests and chi-square tests.

Measurement: Three measures of posttraumatic stress and a fear questionnaire. 1) Diagnostic Interview Schedule: PTSD Symptoms, 2) Impact of Event Scale, 3) Posttraumatic Stress Scale for Family Violence (constructed for this study, based on 17 criteria of DSM-III-R, 4) Marks Fear Questionnaire (used the five-item Agoraphobia Scale and five-item Social Phobia Scale), 5) Beck Depression Inventory, 6) Rosenberg Self-Esteem Scale, 7) Characteristics of Partners, 8) Expanded Conflict Tactics Scales of Aggression, 9) Injury Scale.

Sample Size and Demographics: 192 women: 159 who obtained help at a shelter-based program and 33 who obtained help elsewhere. Age: $M=34.3$ ($SD=8.5$). Race/ethnicity: white- 91.4%, African American-4.9%, Hispanic- 1.6, Native American- 1.6%, Asian American-0.5%. Subjects had remained in the relationship an average of 8.1 years ($SD=7.5$). Injuries sustained: permanent (22.6%) or severe (16.8%) injury.

Period of Study: Not stated

Costs: Not stated.

Prevalence: Women in the DVP group experienced more severe violence (80%) than NDVP (59%). Permanent injury: DVP-26%, NDVP-9%. 60 of DVP and 62% of NDVP met the diagnostic criteria for PTSD.

Incidence: Not stated

Mental Health Consequences: PTSD: 60% of DVP, 62% of NDVP. Most reported symptoms: intrusive memories, avoiding reminders, hyperarousal, nightmares. Agoraphobia scale: subjects scored between normative sample and sample of agoraphobic women.

Critique: Return rates ranged widely across shelters. The exact refusal rate by women recruited by DV program staff is unknown due to poor record-keeping, thus non-response bias is unknown. Inconsistent administration of the instrument across the different venues and by different persons could result in selection and response bias.

The authors note that the source of recruitment did not always indicate the type of help the women had received. The authors divided subjects into the DVP and NDVP subsamples by responses on the questionnaires, even though services did not always represent discrete groups (for example, not all women going to shelter-based programs were actually sheltered there) and even though the authors admit that they could not clearly distinguish between these two groups based on the questionnaire data. Despite this questionable procedure, the study went ahead and the two groups were compared on the numerous variables in the study; findings are therefore limited.

Title of Paper: Violence Among Intimates: An Epidemiological Review.

Author(s): Evan Stark and Anne Flitcraft

Publication: In Handbook of Family Violence, V. B. Van Hasselt, R. L. Morrison, A. S. Bellack, M. Hersen, (Eds.), 1988, New York: Praeger, 293-317.

Objectives: To describe how domestic violence is distributed in various populations, identify its demographic features, and distinguish its etiology by comparing violent with nonviolent groups.

Types of Violence: Domestic violence (wife battering).

Data Sources: Sociological, psychological, psychiatric and medical literature.

Methods: Literature review.

Measurement: Not applicable.

Sample Size and Demographics: Not applicable.

Period of Study: Not applicable.

Costs: Not stated.

Prevalence: Cites various studies. Concludes that 20% to 25% of adult women in the U.S. have been physically abused at least once by a male intimate (12 to 15 million women).

Incidence: Not stated.

Mental Health Consequences: Although the external validity of available data is limited, authors conclude that abuse is one of the most important single background factors for patients in mental health settings. Cites study from 1984 that 25% of women utilizing a psychiatric emergency service had a history of domestic violence.

Critique: Authors failed to discuss subject of same-sex domestic violence, and only discussed domestic violence among African Americans and whites. In reviewing the literature, they concluded that "there is some evidence that blacks are more prone to violence (and to abuse) than whites, but this may reflect overreporting by blacks. There are slightly more abusive relationships as one moves down the income ladder." (p. 313) Authors suggested that blacks may "overreport" domestic violence. Authors failed to note racism and police harassment of blacks.

Title of Paper: Killing the Beast Within: Woman Battering and Female Suicidality

Author(s): Evan Stark, Anne Flitcraft

Publication: International Journal of Health Services, 25(1), 1995, 43-64.

Objectives: To 1) study the significance of battering among a general population of women who attempted suicide, 2) assess the special significance of battering for suicidality among Black women, 3) to evaluate the medical response.

Types of Violence: Domestic violence

Data Sources: Medical records

Methods: Retrospective case analysis. Medical records of women who came to a hospital emergency services as attempted suicides over a one-year period were reviewed. A woman was identified as a suicide attempt if her presenting complaint was suicide attempt or included an intentionally self-inflicted injury or attempted overdose. Full medical records of included patients were reviewed by trained **abstractors**. Abuse in patients' histories was assessed and patients were identified as battered if certain criteria were met. Chi square analyses were used to discover in what ways battered women who attempted suicide differed from nonbattered women who attempted suicide.

Measurement: Adult trauma history screen (ATHS), developed by Flitcraft and validated by Stark. Demographic, medical, suicide attempts and surrounding circumstances, and relevant medical, social service, and psychiatric responses were recorded from patients' charts by the **abstractors**.

Sample Size and Demographics: 176 women who attempted suicide. Age: $M=30$ years (range=16 to 69). Race: African American-45, white-127, other-4. Modal educational level was a high school diploma. Most women (70%) of battered and nonbattered groups were single, divorced, or separated.

Period of Study: 1980-1981.

Costs: Not stated

Prevalence: 29.5% (52) of the 176 women who attempted suicide during the sample year are battered; 22.2% (39) have at least 1 documented incident of domestic abuse; 7.3% (13) have at least one injury from assault, although the assailant is not named.

Incidence: Not stated

Mental Health Consequences: 48.8% of the Black women who attempted suicide were

battered, compared to 22.2% of the white women. 2 1.1% of the battered women attempted suicide three times or more, compared to 8% of the nonbattered women.

Critique: The authors utilize a theoretical model of domestic violence as “coercive control” and battered women’s “entrapment” in the relationship. The authors document ways in which battering is often a hidden phenomenon in the medical setting, and offer a methodology to de-code common euphemisms that often veil domestic violence. Authors encourage practitioners to be aware of clues that identify women as battered, and to focus intervention on safety concerns. Authors assert that failing to identify abuse and targeting intervention at a battered woman’s alleged pathology rather than the domestic violence can contribute to her sense of hopelessness, isolation and entrapment, and increase the risk of further suicide attempts. The authors conclude that this study clearly implicates battering as a major determinant of female suicide attempts, especially for Black women.

Limitations of the study center around the authors tendency to make numerous assertions but often do not offer data to substantiate their claims. The study’s major instrument, developed and validated by the authors, does not have a statistical figure of its integrity, although the criteria are extremely reasonable and conservative. Strengths of the study are based in the demonstrated relationship between battering and suicide in the population studied, and the theoretical framework of the authors, which includes advocacy for appropriate intervention. Implications for intervention are discussed at length.

Title of Paper: Medicine and Patriarchal Violence: The Social Construction of a "Private" Event

Author(s): Evan Stark, Anne Flitcraft, William Frazier

Publication: International Journal of Health Services, 9, 1979, 461-493.

Objectives: To illustrate the extent to which battering is broadly social in its construction, its dynamic, and its consequences, and to which the picture of abuse as a private matter supports this social construction.

Types of Violence: Domestic violence (wife battering).

Data Sources: Medical records, and a review of the literature on wife battering.

Methods: Medical records were analyzed for records or indications of previous abuse/battering (studied previous emergency room visits, hospitalizations, clinic records and social and psychiatric service notes). Each episode of injury was examined and women were divided into four battering risk groups-"positive," "probable," "suggestive" and "negative."

Measurement: Actual medical records which verified or indicated abuse and injury.

Sample Size and Demographics: 481 women admitted to a major urban hospital emergency room. Primarily low-income white and minority women. No other demographic details were given.

Period of Study: One month.

Costs: Not stated.

Prevalence: Battering was ten times more frequent than physicians acknowledged.

Incidence: Not stated.

Mental Health Consequences: Prior to the onset of abuse, with the single exception of alcoholism, there were no statistically significant differences between battered and nonbattered women in their rates of psychiatric disorders, mental health service utilization, or in the appearance of psychosocial "labels" in their medical records. Physical abuse was quickly followed by psychiatric disorders, self-abuse, and personal stress.

Critique: Study could be regarded as highly subjective-the researchers used general categories instead of specific scales to measure and assign degree of battering ("positive," "probable," "suggestive" and "negative"). Also, demographic data given was minimal and limited.

Title of Paper: Effects of Domestic Violence on Children's Behavior Problems and Depression

Author(s): Kathleen J. Sternberg, Michael E. Lamb, Charles Greenbaum, Dante Cicchetti, Samia Dawud, Rosa Manela Cortes, Orit Krispin, Fanny Lorey

Publication: Developmental Psychology, 29, 1993, 44-52.

Objectives: To assess the effects of domestic violence on children's behavior problems and depression

Types of Violence: Child abuse, domestic violence

Data Sources: Questionnaire administered to subjects

Methods: In Tel Aviv and Jerusalem, social workers referred all families from their files who met selection criteria. Sample was limited to lower-class, two-parent Jewish families. Children who were mentally retarded, who were victims of sexual abuse, whose parents were mentally retarded or had diagnosed psychiatric disorders, and children who only experienced psychological maltreatment or neglect were excluded. Sample was divided into three groups of children who experienced some form of chronic domestic violence (at least one incident in the previous six months) and a matched comparison group. Upon consent, parents and children were administered a questionnaire separately in their homes. Multivariate analyses of variance and chi square tests were conducted.

Measurement: Childhood Depression Inventory, Youth Self-Report, parent forms of the Child Behavior Checklist

Sample Size and Demographics: 110 Jewish Israeli children and their parents from violent families. 61 boys, 49 girls. Age: $M = 10.7$ years (range 8-12). 75% had parents born in the Middle East or North Africa. Mothers and fathers had average of 9.4 years of formal education. All children lived with their biological parents, and had an average of three siblings.

Period of Study: Not stated

Costs: Not stated

Prevalence: Children abused by one or both parents-33; children who witnessed violence between parents (spouse abuse)-16; children who were both abused and who witnessed parental violence (abused witnesses)-30.

Incidence: Not stated

Mental Health Consequences: Depression and behavior problems more likely for children from violent homes than in comparison group.

Critique: Small and nonrepresentative convenience sample limits generalizability of findings. Very limited information on number and characteristics of eligible families approached and percentage of families completing the protocol. Levels of agreement among informants were extremely low. However, children's self-reports suggest that children from violent homes are more at risk for depression and behavior problems than the control group, as self-report data from children from violent homes are similar to scores obtained by children in other abused samples.

Title of Paper: Gender Differences in Reporting Marital Violence and Its Medical and Psychological Consequences

Author(s): Jan E. Stets, Murray A. Straus

Publication: In Physical violence in American Families: Risk Factors and Adaptation to Violence in 8,145 Families, M. A. Straus and R. J. Gelles (Eds.), 1990, New Brunswick, NJ: Transaction, 151-165.

Objectives: To 1) provide empirical evidence on the relationship between violence, its context, and injury by gender; and 2) investigate gender differences in reporting violence

Types of Violence: Domestic violence

Data Sources: 1985 National Family Violence Resurvey

Methods: Retrospective, secondary data analysis from 1985 NFVR.

Measurement: Conflict Tactics Scales, context measure, physical injury measures, psychological injury measures (Depression, Stress, Psychosomatic Symptoms indices)

Sample Size and Demographics: 6,002 persons, national sample. 3,522 women, 2,480 men.

Period of Study: 1985

Costs: Not stated

Prevalence: 825 respondents (476 women, 349 men) experienced one or more assaults. Women victims who reported minor assaults by spouse-204, severe assaults by spouse-145. Men victims who reported minor assaults by spouse-172, severe assaults by spouse- 109. Women whose spouse initiated assault- 182, men whose spouse initiated- 131.

Incidence: Not stated

Mental Health Consequences: Victims of assaults are more likely to experience psychosomatic symptoms, stress, and depression than persons not assaulted, and women victims suffer more psychological injury than men victims. Women victims are significantly more likely to experience depression than men victims (findings compare assaulted women with other women).

Critique: The authors investigated context of family violence and degree of injury in order to provide a more complete analysis of family violence captured in the 1985 survey, especially regarding the finding that wives assault their husbands at about the same rate as husbands assault their wives. Data shows association, not causality. Demographics not

presented. Although similar violence patterns are presented by the data, differences in partners' responses to the violence are described and analyzed. Comparisons of the findings to previous research are discussed.

Authors contend that different research and intervention methods should be used for different populations, based on knowledge of the population to be assisted. Differences are drawn between battered women who are not abusive towards their husbands, and the larger community that the 1985 survey ostensibly represents. In this larger community, violence is not gender-specific and therefore unrelated to societal stratification. Authors do not recognize institutional and societal legitimization of male violence as does other research.

Title of Paper: The Outcome of Participation in a Shelter-Sponsored Program for Men Who Batter

Author(s): Richard M. Tolman, Gauri Bhosley

Publication: In Abused and Battered: Social and Legal Responses to Family Violence, Dean D. Knudsen and JoAnn L. Miller (Eds.), 1991, New York: Aldine de Gruyter, 113-122.

Objectives: To evaluate the efficacy of a shelter-sponsored intervention program for male batterers-whether men stop their threats of violence and direct physical aggression following involvement in the program

Types of Violence: Domestic violence

Data Sources: Telephone survey

Methods: Retrospective study using a convenience sample of women whose partners completed program participation between February 1986 and February 1988, and who had attended at least one group session after intake. Approximately one year after program participation, researchers contacted the women partners for a structured telephone interview; a little more than half of the original group participated (14 declined to participate, 32 were unreachable). Descriptive statistics were used to analyze the women's responses about men's behaviors and quality of the relationship after the program. The relationship between women's current functioning and the level of abuse they experienced during the follow-up period was studied using a regression analysis.

Measurement: Authors developed a structured telephone interview questionnaire that included demographic items, relationship history, modified Conflict Tactics Scales, psychosocial problem checklist, and relationship change.

Sample Size and Demographics: 53 women (out of the original 99). Women: Mean age=35.8 years (SD=7.6). Predominantly white, average education=12.9 years (SD=1.9). 39 employed outside the home, 21 full-time. 40 of the women still lived with the men who had abused them. Men: Mean age=37.2 years (SD=8.0). 48 were white, average education=12.1 years (SD=2.1). Program participation averaged 12 sessions (during the time period examined by this study, attendance at 26 ongoing sessions was the minimum for successful completion of the program).

Period of Study: February 1986 to February 1988

Costs: Not stated

Prevalence: Direct physical aggression: At some point following participation in the

program, 41.5% of the men; in the 6 months prior to survey, 35.8% (in the 6 months prior to program, 100% of the men were physically aggressive). Indirect physical aggression: at some point after program, 73.6%; in past 6 months, 64.2%. Psychological abuse: at some point after program, 92.5%; in past 6 months, 86.8%.

Incidence: Not stated

Mental Health Consequences: Women's reports of psychosocial problems: 64% reported depression, 52% felt unhappy, 47% felt afraid, 56% felt anxious, 62% felt nervous. Psychological abuse empirically proven to be the most powerful predictor of women's psychosocial problems.

Critique: Despite a relatively small and nonrepresentative sample, this study demonstrates that psychological abuse is in itself harmful, and supports the contention that intervention for batterers must focus on the entire range of their abusive behaviors. Authors caution how a partners' participation in a batterer's program may inadvertently keep women in abusive relationships that they might otherwise leave, and to be vigilant about the possibility that intervention with batterers may be counterproductive to women's well-being.

Limitations of the study include lack of a control group to determine whether improvement in men's behavior is due to their participation in the program, especially since men averaged 12 sessions during a time period when 26 ongoing sessions was the minimum for successful program completion. Also, recall bias on the part of respondents may occur, since women were contacted one year after program participation, especially those women who were no longer living with their abuser. No data given on women who were not included in the follow-up study.

Title of Paper: The Battered Woman Syndrome Study

Author(s): Lenore E. Walker

Publication: In The Dark Side of Families, David Finkelhor, Richard J. Gelles, Gerald T. Hotaling, Murray A. Straus (Eds.), 1983, Newbury Park, CA: Sage, 31-48.

Objectives: To learn as much as possible about domestic violence from the perspective of the battered woman

Types of Violence: Domestic violence

Data Sources: Face-to-face interview administering a questionnaire

Methods: Retrospective study using a convenience sample of self-identified battered women who lived in the 6-state Rocky Mountain region. Women were recruited using referral sources and direct advertising. A woman was considered eligible if she reported that she was battered at least twice by her husband or intimate male partner. Direct contact was made with minority and at-risk groups (eg, women in prison) to encourage participation. Intake and scheduling procedure was designed to ensure attendance and participation. Special interview techniques were developed to administer the 200-page questionnaire and other scales; the procedure took usually 6-8 hours. Over half the sample reported details of a relationship with a nonbatterer, data which the researchers used for comparison purposes.. Data was analyzed using descriptive statistics, path analyses, and analysis of variance.

Measurement: Questionnaire developed for this study asked comprehensive questions about the women's and their partner's life experiences, alcohol and drug use, violence, and demographic items; Levinson IPC Locus of Control Subscales: Internal scale, Powerful Others scale, Chance scale; CES-D scale for measuring depression; semantic differential scale for measuring self-esteem.

Sample Size and Demographics: 403 battered women who lived in Colorado, Montana, South & North Dakota, Wyoming, and Utah. Largest number of women came from metropolitan Denver area; other areas of Colorado and the other 5 states accounted for almost one-third of the sample. Women were interviewed on several Indian reservations, battered women's shelters, and prisons. A special group of women who had killed their batterers was included. Were were in "expected proportions-for all demographic categories analyzed including race and social class" (p. 32). Battering behavior was found in several different kinds of relationships, although most victims were married. 24% of the subjects were still in the battering relationship.

Period of Study: July 1978 through June 1981

Costs: Not stated

Prevalence: All women were physically battered in a current or previous relationship; 24% of the subjects were still in the battering relationship.

Incidence: Not stated

Mental Health Consequences: High depression scores on the CES-D scale. Depression linked to presence/absence of positive reinforcement (loving contrition) in the battering relationship.

Critique: Most useful findings include: 1) the determination that there is no specific personality traits for a “victim-prone” personality, but there are susceptibility factors; 2) violence comes from batterers’ learned behavioral responses, and there may be an identifiable violence-prone personality for men; 3) certain combination of factors can strongly indicate a high risk potential for battering; 4) the confirmation of the Cycle Theory of Violence. Authors claim that the theories of the Cycle of Violence and learned helplessness were confirmed by the results, but the presence of “learned helplessness” is inferred but not empirically proven in the sample.

Although the author does not pathologize battered women with personality typecasting, she also infers that the battered woman’s deficits contribute to the longevity of the battering relationship; author also suggests that battered women’s childhood experiences and adult violent relationship appear to interfere with her ability to stop the batterer’s violence. Differences in a woman’s behavior in battering and nonbattering relationships are attributed to her unstable personality, although the author found “sufficient evidence” that her terror was “appropriate” (p. 47).

Title of Paper: Science and Violence Against Wives

Author(s): Laurie Wardell, Dair L. Gillespie, Ann Leffler

Publication: In The Dark Side of Families: Current Family Violence Research, David Finkelhor, Richard J. Gelles, Gerald T. Hotaling, and Murray A. Straus (Eds.), 1983, Newbury Park, CA: Sage Publications, Inc., 69-84.

Objectives: To evaluate the extent to which domestic violence literature contains anti-woman bias, despite the social science literature's acknowledgement of gender stratification and wife-beating.

Types of Violence: Domestic violence

Data Sources: Largely sociological literature (1971-1981)

Methods: Literature review

Measurement: Not applicable

Sample Size and Demographics: Not applicable

Period of Study: Not applicable

Costs: Not applicable

Prevalence: Not applicable

Incidence: Not applicable

Mental Health Consequences: Not applicable

Critique: Despite the literature's explicit demands for the end of the victimization of women, it is the authors' perception that the literature depicts battered wives as deviant and at-fault for the violence they suffer. Battered women are considered different from nonbattered women, and their purported differences are assumed to play a role in their victimization. The authors identify four sets of assumptions about how battered women and non-battered women differ: traditional sex-role socialization, provocative behavior, learned helplessness, or superiority in personal resources. Despite a lack of empirical support for these depictions, the literature's continual emphasis on the wife reveals an a priori assumption of victim-blaming, and diverts emphasis from the male domination as the cause of wife-beating.

The authors believe that domestic violence literature is rife with sexist bias regarding analyses of causes, solutions, and context of the problem. However, the authors

make several claims that they do not substantiate, introduce questionable terminology and concepts (eg, “officially battered” and “officially unbattered” women), and consistently criticize previous research without suggesting acceptable alternatives.

Title of Paper: The Relationship Between Physical Assault and Psychological Functioning in a Sample of University Women, and the Relative Effects of Physical and Sexual Assault

Author(s): Kathleen Wayland, Susan Roth, John E. Lochman

Publication: Journal of Traumatic Stress, 4, 1991, 495-514.

Objectives: To 1) determine the prevalence and descriptive characteristics of physically abusive relationships in a sample of university women, 2) identify the psychological correlates of physical abuse and the relative effects of physical and sexual assault on psychological functioning, and 3) determine the relationship between psychosocial functioning and various abuse characteristics.

Types of Violence: Physical and sexual assault

Data Sources: Self-administered questionnaire

Methods: Cross-sectional design using a probability sample of 502 female students and 503 employees at a large university. Overall response rate was 54.2% (N=542). Demographic characteristics of nonrespondents were compared to respondents. Questionnaire mailed to subjects with return envelope and cover letter. Descriptive statistics and multivariate regression model comparisons were computed for descriptive data and to assess the effects of physical and sexual assault. Odds ratios were calculated to obtain estimates of relative risk for psychiatric dysfunction.

Measurement: 13 page questionnaire included Derogatis Symptom Checklist (SCL-90R), Social Adjustment Scale Self-Report (SAS-SR), Veronen-Kilpatrick Modified Fear Survey (MFS), demographic data, and descriptive information about physically assaultive relationships (modeled on the Conflict Tactics Scales).

Sample Size and Demographics: 542 university women: 345 female students, 195 employees*. (Totals vary due to nonresponse for some items). Race: white-470, Black-47, other-24. Married-148, not married-394. Age: predominantly under 40 years old.

Period of Study: 1985

Costs: Not stated

Prevalence: Lifetime prevalence: 79 (15%) of respondents had been physically assaulted within an intimate relationship. 70 (13%) had been sexually assaulted, 25 (5%) experienced both physical and sexual assault. Within the year prior to survey completion, 24 (4%) reported an assault. Overall, 125 women (23%) had experienced either, or both, physical or sexual assault. 60% of assaulted women were assaulted more than once, with

47% assaulted on two or more occasions.

Incidence: Not stated

Mental Health Consequences: Physical assault significantly related to prediction of overall psychological functioning. Sexual assault status also was significantly related to overall psychological functioning, but did not significantly predict psychological dysfunction after the effects of physical assault were partialled out.

Correlates of physical and sexual assaults differ, although both are related to general psychological dysfunction. Physical assault was uniquely associated with poor social adjustment and with pervasive but moderate psychological distress. Sexual assault was uniquely associated with clinically elevated levels of symptomatology.

Critique: Probability sample used to study a more representative sample of adult women, but the final sample tended to be dominated by young unmarried white women of higher socioeconomic status. Low response rate of 54.2%, and although demographic data was available on respondents and nonrespondents, authors did not indicate significant differences between the two groups. Due to sample, findings have limited generalizability. Retrospective reporting may invite recall bias. Instruments and measures were reliable and valid, and used in prior research with clinical and nonclinical populations.

Findings do not allow conclusions about causal directionality, but provide evidence of an association between both physical and sexual assault and psychological dysfunction in nonclinical populations. Physical assault is demonstrated to be an independent risk factor for psychological dysfunction. Assault status, though, accounted for small percentage of the variance in psychological functioning, and authors suggest that future research identify mediators of response to physical and sexual trauma, and factors related to adaptive coping.

Title of Paper: Psychiatric Disorders of Abused Women at a Shelter

Author(s): Chole Garibay West, M.D., Adelaida Fernandez, M.D., James Randolph Hillard, M.D., Mary Schoof, M.D., and Joseph Parks, M.D.

Publication: Psychiatric Quarterly, 61: 295-301, 1990.

Objectives: To evaluate the prevalence of psychiatric disorders of abused women in a shelter.

Types of Violence: Domestic violence.

Data Sources: Clinical interviews of a convenience sample of 30 shelter residents.

Methods: Within the first 2 weeks of the participant's residence at the shelter, she was interviewed using an unstructured clinical interview, followed by structured measures.

Measurement: Depression was measured using the Inventory to Diagnose Depression (IDD) and the Hamilton Psychiatric Rating Scale for Depression (HRD). PTSD was measured using the Post-Traumatic Stress Disorder Structural Clinical Interview for DSM-III-R (SCID) Module. Degree of domestic violence was measured using a modified Conflict Tactics Scale (CTS).

Sample Size and Demographics: 30 battered women. **Age:** $M = 30$, $s.d. = 6.44$, range 19-42. **Race:** African American--50%, others not stated. **Marital status:** separated or divorced--67%, others not stated.

Period of Study: February, 1989 - October, 1989.

Costs: Not measured.

Prevalence: Not applicable (only battered women were studied).

Incidence: Not applicable.

Mental Health Consequences: In the unstructured interviews, 37% of the women had major depression; 47% had PTSD; 13% had adjustment disorder; 7% had substance abuse; 3% had schizophrenia; 10% had personality disorders; 3% had panic disorder; 10% had no disorder.

Critique: The sample is small and the validity of diagnoses from unstructured clinical interviews is questionable, particularly because not even inter-rater reliability is given. Causal direction cannot be inferred. However, the assessment of multiple specific mental disorders and the use of multiple measures (clinical interview along with SCID, HRD, and IDD) are strengths of the study.

Title of Paper: Children of Battered Women: The Relation of Child Behavior to Family Violence and Maternal Stress

Author(s): David A. Wolfe, Peter Jaffe, Susan Kaye Wilson, Lydia Zak

Publication: Journal of Consulting and Clinical Psychology, 53, 1985, 657-665.

Objectives: To determine if child adjustment problems are greatest among children who had recently witnessed marital violence, and if these problems are explained more fully on the basis of maternal stress and family changes than solely on the basis of witnessing physical violence.

Types of Violence: Domestic violence

Data Sources: Structured interview

Methods: Retrospective study using a convenience sample of residents of seven shelters for battered women and a community comparison sample. Shelter residents were approached at an appropriate time by a trained shelter staff member and interviewed by a research staff in a designated room. Community sample was recruited through newspaper advertising and screened to exclude families exposed to violence.

Children were classified as members of violent families based on independent ratings of mothers' responses to items on physical aggression subscale of the Conflict Tactics Scales. Selection criteria based on interview data and maternal ratings of aggression. Inter-rater agreement calculated to determine classification of families into violent and nonviolent groups.

All subjects were individually administered a structured interview by trained research assistants. After the interview, psychometric instruments administered to assess maternal and child adjustment, life events, and family conflicts. Descriptive statistics, multivariate analyses of variance, hierarchical regression analyses were conducted.

Measurement: Conflict Tactics Scales; maternal stress and adjustment measured by General Health Questionnaire, Life Experiences Survey, Family Crisis Index; Child Behavior Profile.

Sample Size and Demographics: 142 mothers, 198 children aged 4- 16 years. Children in shelter=102, community sample=96. Shelter families had more children in the home and fewer single parents than nonviolent community sample.

Period of Study: 12 months

Costs: Not stated

Prevalence: All families in the violent (shelter) sample reported overt physical

violence between adult partners.

Incidence: Not stated

Mental Health Consequences: Prevalence of range of behavior problems defined as high as 42.2% for children from violent families, compared to 19.8% for nonviolent families. Among the children from violent families, 34% of the boys and 20% of the girls fell within the clinical range of behavior problems (overall 26.5% reported, two-and-a-half times the rate of children from nonviolent families). Factors associated with maternal stress strongly related to domestic violence accounted for 19% of the variance in children's behavior problems.

Critique: No direct causal link established, but findings support that children in shelters are at greater risk for adjustment problems than children not exposed to domestic violence. Mothers' reports on children's behavior may be biased, and comparability of battered women's responses with mothers from nonviolent families cannot be determined. Reports on children's behaviors could also come from additional sources.

Strengths of the study include high reliability and validity of the measures and use of a control group. However the convenience sample and incomplete demographic information limits generalizability. Due to the retrospective nature of the study, long-term effects could not be determined.

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PART III
THE COST OF DOMESTIC VIOLENCE
TO THE HEALTH CARE SYSTEM

METHODOLOGY

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INTRODUCTION

Domestic violence is a major public health problem which impacts all strata of society. Yet, the economic toll of this terrible epidemic is unknown. Domestic violence drains healthcare resources, causes many victims to lose time from productive activity, may impact innocent children with the misfortune to be part of families in which abuse occurs, and even results in death to some victims. Its impact can be felt on the acute care system, the mental health system, the social services system, and the criminal justice system as well as in the workplace.

In order to determine what policies should be implemented to reduce the economic burden of domestic violence, it is necessary to have a measure of the economic cost to society. This measure can help policymakers to determine which interventions and treatments are cost-effective, and to allocate dollars to services and research related to domestic violence.

Unfortunately, good data for estimating the societal cost of domestic violence are not readily available. This report presents the methodology and suggests what data can best be used to develop an estimate of the economic impact of domestic violence in the United States.

CONCEPTUAL ISSUES

The economic cost of domestic violence represents the monetary burden to society of illness, lost productivity, mental health consequences, social and criminal justice system services, and premature death resulting from domestic violence. The costs are typically divided into two components. Direct costs are the actual dollar expenditures related to the violence. Indirect costs consist of morbidity and mortality costs. Morbidity costs are the value of lost output due to the reduced or lost productivity caused by domestic violence, including the value of lost work days and lost housekeeping days due to illness and disability. Mortality costs are the value of lost output due to premature death resulting from domestic violence (**Hodgson and Meiners 1982**).

Definition of Domestic Violence

Proceeding from a theoretical to an empirical estimate of the cost of domestic violence requires an empirical definition of domestic violence. The term “domestic violence” requires definitions of both the relationship between victim and offender, and the type of violence to the extent that it is restricted to violence between partners.

In research on abuse among persons known to one another -- particularly those in intimate relationships -- violence is frequently classified as physical, sexual, or emotional (Murphy & Cascardi, 1993). Both physical and sexual abuse can be categorized as physical violence to the extent that the intent of sexual abuse is physical injury and not exclusively humiliation. The model developed here includes all three types of abuse.

Definitions of partners vary. Partners may share a *kin relationship*; i.e. they are related by marriage. Partners may also be defined as having a *domestic relationship*; i.e. they live together in the same household, whether married or not (Gelles, 1990). In the broadest case, partners may be defined as those having an *intimate relationship* whether or not they are married or live in the same household; i.e., they “know each other in a close personal way” (Gelles, 1990, p. 53). It is thought that the use of narrower definitions biases prevalence estimates downward (Miller, 1991). Because health care providers are concerned with future health risks (which are probably the most relevant indicator of total health costs), they are concerned with assaults by any social partner (Stark & Flitcraft, 1991), i.e. those with any intimate relationship. The proposed model includes domestic violence by all partners with an intimate relationship, but excludes two other types of abuse by intimates: elder abuse and child abuse. However, if a child experiences consequences as a result of abuse between adults, such as suffering emotional distress at witnessing abuse between parents, then it is included.

Prevalence and Incidence Approaches

Two approaches can be used to measure the number of victims of domestic violence: prevalence and incidence. Prevalent cases include all those who were abused in a given time period, most **often** a year, regardless of whether these were new cases or ongoing abusive relationships. Incident cases include only the new cases occurring within a given time period. Incidence-based costs represent the lifetime costs resulting from a disease or

illness. In the aggregate, incidence-based costs refer to the total lifetime costs of all cases with onset of disease in a given base year (see for example, Rice, MacKenzie, and Associates, 1989).

The approach used depends on the purpose of the analysis. If the results are to be used for cost control, then prevalence-based costing is appropriate; it identifies the major components of current expenditures and forgone resources and identifies possible targets for economy. If the analysis is aimed at making decisions about which treatment or research strategy to implement, then the incidence-based approach is more appropriate because it provides the basis for predictions about the likely savings from programs that reduce incidence or improve outcomes. In general, prevalence-based estimates are larger than incidence estimates (Andrews, et al., 1985).

Given that a “case” of domestic violence is typically an ongoing relationship in which periodic episodes of abuse occur, measuring incidence is difficult because it requires knowledge of when the first episode of abuse occurred. For measuring the impact of most illnesses, prevalence and incidence can be identified, and depending on the purpose of the analysis the appropriate measure can be used. However, the distinction between prevalence and incidence is often unclear in the context of domestic violence. Many surveys query as to abuse during the last year, but do not ask if the abusive relationship is new (i.e. incident) or ongoing (i.e. prevalent). For this reason, it is exceedingly difficult to distinguish between the two measures in existing **datasets** or even to design appropriate survey questions. Therefore, the model developed here will estimate the annual (prevalence-based) costs of domestic violence, because that is what the available data probably capture.

The Human Capital and Willingness-to-Pay Approaches

The human capital approach is the most commonly used approach for valuing forgone productivity. According to this approach, an individual is seen as producing a stream of output over time that is valued at market earnings or an imputed value for housekeeping services. It assumes a social perspective and has the important advantage of using data that are reliable and readily available. It is useful for answering questions regarding the economic burden of a disease or injury for a specific time period

(e.g. the cost of domestic violence in 1995) or for cost-benefit analysis (i.e., determining the cost savings of a specific procedure or intervention program that will reduce the prevalence of domestic violence). It also has some drawbacks. Because the value of human life is based on market earnings, it yields very low values for children and the retired elderly. The human capital approach may undervalue or overvalue life if labor market imperfections exist and wages do not reflect true abilities, as may be the case for many women. Certain dimensions of illness and death such as pain and suffering are ignored.

A conceptually different approach, willingness-to-pay, captures other aspects of the value of life. This method values human life according to what individuals would be willing to pay for a change that reduces the probability of illness or death (Schelling, 1968 and Acton 1975). This method could be helpful in indicating how individuals value health and life, in deriving social preferences regarding public policy, and in assessing the burden of pain and suffering, which have an intangible quality not amenable to evaluation in terms of the monetary value of resources used or forgone. A review by Robinson (1986) makes a strong case that the willingness-to-pay method is a **fundamentally** “incorrect” method of valuing life for cost-effective public policy. Robinson concludes that it is subjective and suffers from circularity because the values placed by individuals on government health programs are clearly influenced by those policies.

The overriding objection to the willingness-to-pay method is that it is extremely difficult to implement in practice. However, the methodology has been refined considerably in recent years. Lifetime earnings as estimated by the human capital method are at least a lower bound to a person’s willingness to pay for a decreased risk of death (Linnerooth, 1979; Institute of Medicine, 1981; and Landefeld and Seskin, 1982). Miller and his colleagues estimated \$2.7 million as the value of saving an anonymous life, which was derived from a synthesis of almost 50 published values, adjusted for the differences in expected life span (Miller et al., 1995). By comparison, the human capital approach estimates the present value of future earnings lost for people who die prematurely by taking into account life expectancy at the time of death for **different** age and gender groups, changing patterns of earning at successive age groups, varying labor force

participation rates, an imputed value for housekeeping services, and the appropriate discount rate to convert a stream of earnings into its present worth (Rice, et al, 1989). Thus, the estimated values of human life in 1992 employing a 2 percent discount rate ranged from \$2,450 for men aged 85 and over to \$1.4 million for men aged 20-24; for women, the values ranged from \$2,534 for those aged 85 and over to \$967,000 for women aged 25-29 (Table 1). These are significantly lower estimates of the value of life than the \$2.7 million estimated by Miller and his colleagues, who also used a 2 percent discount rate.

The human capital method is most **often** used in analyses that seek to evaluate alternative demands for scarce health care resources and promote economic rationality in health services policy, planning, and management. It is the basis for the model developed here.

Transfer Payments

Welfare, disability, and other benefit payments under public and private programs constitute a reallocation of resources and the net cost to society is zero. Inclusion of transfer payments would result in double counting and are therefore not included in the cost estimates.

Consumption

Questions have been raised in the past as to whether the cost of morbidity and mortality due to illness should be estimated based on an individual's output or an individual's output minus consumption (Weisbrod, 1961). The concern of this study is with the cost of domestic violence to society. The individual, not just the output he or she contributes in excess of consumption, is valued by society. Economists today generally agree that consumption should not be deducted. In accordance with current accepted methodology, consumption is not deducted **from** the individual's output in the present model.

THE MODEL

The cost of domestic violence is estimated as the product of two components: prevalence (the number of cases occurring in the year for which costs are to be estimated)

and the cost per case. The model developed below is estimated separately for each **cost** component. The components of the model are summarized in Table 3.

Direct Costs

The direct cost of domestic violence is the value of resources that could be allocated to other uses in the absence of domestic violence. This includes healthcare expenditures for hospitals, physician and other professional services, mental health services, prescriptions, ambulance and helicopter transport, and medical equipment, as well as expenditures for prevention and research. Also included are other related expenditures for social services and the cost to the criminal justice system. These last two cost components will be included in the direct cost portion of the model described below, but are discussed separately because they differ in nature **from** healthcare services. These direct costs represent actual expenditures for goods and services.

In this model, direct costs are calculated as the sum of each cost component.

$$(1) \text{ DIR} = \sum_{i=1}^n V_i * C_i$$

where DIR is the total direct cost
i is the cost component (e.g. hospital care, physician services, etc.)
n is the number of cost components
V_i is the number of victims of domestic violence using the service
C_i is the cost of the service per person

Other Related Costs

Social Service Costs. The cost of social services used as a result of domestic violence is primarily incurred through the costs of operating battered women's shelters and the cost of housing and services for the victims utilizing homeless shelters as a result of flight from domestic violence. Other related costs arise from the placement and care for children who must be removed from their families due to domestic violence. These include the cost of processing cases within child protective services, placement, and maintenance of children in foster care. These costs are estimated as

$$(2) SS = \sum_{i=1}^n V_i * C_i$$

where SS is the total cost of social services used by victims of domestic violence
 V_i is the number of victims of domestic violence using the service
 (i.e. the number of women in shelters, the number of children in protective custody and foster care)
 C_i is the cost per victim (cost per sheltered woman or protected child)

Criminal Justice System Costs. The cost of domestic violence to the criminal justice system can be broken down into three areas:

- 1) costs of police response and action;
- 2) costs of the adjudication of criminal complaints and charges filed as a result of domestic violence;
- 3) costs of incarceration of individuals charged and convicted of acts of domestic violence

The cost of police response and action include the labor cost of calls to 911 and the labor cost of police responding to domestic violence calls including time spent on arrest, processing, the writing of reports and **testifying** at hearings and trials.

The cost of adjudication of domestic violence cases include court costs for arraignment, hearings, and trial of domestic violence cases including personnel costs, court time, and lawyers' fees. These costs include the cost of issuing and enforcing temporary restraining orders.

The cost of incarceration is the cost of detaining a suspect in the city or county jail pending arraignment or trial and the cost of incarcerating a convicted offender in prison.

Hence, the cost of domestic violence to the criminal justice is estimated as:

$$(3) CJ = (N_1 * C_1) + (N_2 * C_2) + (N_3 * C_3)$$

where CJ is the cost of domestic violence to the criminal justice system

N_1 is the number of police calls

C_1 is the cost per police call

N_2 is the number of criminal cases filed

C_2 is the cost per case

N_3 is the number of suspects and convicted offenders

C_3 is the cost per case of detention or incarceration

Indirect Costs

The indirect costs of domestic violence are the value of lost output resulting from cessation or reduction of productivity caused by morbidity and mortality. Victims of abuse may lose time from work or housekeeping that can extend for years. They also may die prematurely.

Morbidity Costs. Morbidity costs are represented by wages lost by people who are unable to work at all because of domestic violence and disability or cannot work at a level of full effectiveness; for persons too sick to perform their usual housekeeping services an imputed value of these services is included. Calculating morbidity costs involves applying average earnings by age and gender to work-loss days for those currently employed, attaching a dollar value to housekeeping services lost because of illness, and applying labor force participation rates and earnings to persons who are too sick to be employed.

In this model, morbidity due to domestic violence is calculated as the number of days of restricted activity during the year times average daily earnings, real or imputed. I.e. :

$$(4) \text{ MORB} = D_{a,s} * [Y_{a,s} * E_{a,s} + Y^h_{a,s} * E^h_{a,s}]$$

where MORB is the value of earnings losses (real and imputed) due to domestic violence per person

$D_{a,s}$ is the number of days of restricted activity (converted to years) during the year of a person of age a and gender s

$Y_{a,s}$ is the mean annual earnings of an employed person of age a and gender s

$E_{a,s}$ is the proportion of the population of age a and gender s that are employed in the labor market

$Y^h_{a,s}$ is the mean annual imputed value of household production services of a person of age a and gender s

$E^h_{a,s}$ is the proportion of the population of age a and gender s who are engaged in unpaid household production

Mortality Costs. Another component of indirect cost is premature mortality; i.e., the current monetary value of **future** output lost due to premature death. **If individuals** had not died prematurely, they would have continued to be productive for a number of years. The estimated cost or value to society of all deaths is the product of the number of deaths and the expected value of an individual's future earnings with age and gender taken into account. This method of derivation considers life expectancy for different age and gender groups, changing pattern of earnings at successive ages, varying labor force participation rates, an imputed value for housekeeping services, and the appropriate discount rate to convert a stream of costs into its present worth.

Mortality due to domestic violence is calculated as:

$$(5) \text{ MORT } \sum_{n=a}^{99} = P_{a,s}(n) [Y_{a,s} * E_{a,s} + Y^h_{a,s} * E^h_{a,s}] * (1+g)^{n-a} / (1+r)^{n-a}$$

where MORT is the present discounted value of loss due to domestic violence death per person

$P_{a,s}(n)$ is the probability that a person of age a and gender s will survive to age n

g is the rate of increase of labor productivity

r is the real discount rate

Assumptions

A number of assumptions are incorporated into the cost estimation model. These are summarized below.

Costs vs. Charges. In measuring direct costs, charge data are more frequently used than cost data, despite the fact that charges do not necessarily reflect resource use. Most researchers use charge data in cost studies because of accessibility and the lack of alternatives. The present proposal suggests using uses charges or expenditure data for the direct cost components.

Discount Rate. Productivity losses associated with domestic violence-related deaths must be converted to a common basis in order to be summed over time. For this

purpose, a discount rate is used. The choice of a discount rate impacts the present value of lifetime earnings estimated; i.e. the lower the rate the less the future earnings are discounted and hence the higher the present value. A discount rate of four percent is recommended, in keeping with current estimation and court valuation practices. Sensitivity analyses should be performed using alternative rates, such as 2 and 6 percent, if 4 percent is used.

Employment Rates. The estimate of lifetime earnings is based on varying labor force participation rates. The assumption is that people will be working and productive during their expected lifetime in accordance with the current pattern of work experience for their gender and age group. For this calculation, the percent of the population in the labor force in 1992 reported by the U.S. Bureau of Labor Statistics (1993) was used. The economic variables used for estimating lifetime earnings in 1992 are shown in Table 1. These variables may be updated to reflect the latest available data.

Earnings. Output losses are based on annual mean earnings by age and gender, adjusted for wage supplements such as employer contributions for social insurance, private pensions, and welfare funds. Cross-sectional profiles of mean earnings by age and gender are employed to estimate lifetime earnings. In applying these data, it is assumed that the future pattern of earnings of an average individual within a gender group will follow the pattern reported by the Bureau of Census during a base year. The average individual may expect his or her earnings to rise with age and experience in accordance with the cross-sectional data for that year. The assumption is that injured persons would have experienced the mean earnings for a person of that age and gender. If the probability of domestic violence is associated with income level, this may misrepresent future income loss. However, data are unavailable to permit any adjustment.

Annual earnings are reported in Table 1. Male earnings are higher than female earnings for each age group. Use of higher labor force participation rates and higher earnings for males measuring output losses has a significant impact on the economic costs of domestic violence for males and females. The present value of lifetime earnings at 2, 4, and 6% discount rates by age and gender for the U.S. for 1992 (the most recent year for which data are currently available) is shown in Table 2. Male earnings are greater than

female earnings, and for both genders the present value of lifetime earnings discounted at 4 percent peaks between ages 20 and 30.

Valuing Household Services. Marketplace earnings underestimate the loss resulting from domestic violence because many persons are not in the labor force. Many of these persons, as well as those in the labor force, perform household services. The value of household work, therefore, must be added to earnings. Walker and Gauger (1980) produced the most frequently used estimates of the value of primary and secondary household production. They used data on time-motion studies of housekeepers multiplied by the relevant market wages for various services performed to obtain an estimate of the cost of replacing the housekeeper's duties with person-hours from the labor force. Valuation was done on a task by task basis. The value of housekeeping services for women not in the labor force as well as for employed men and women are estimated.

More recently, Peskin (1984) used a somewhat different estimation technique. Like Walker and Gauger, her methodology involved calculating the mean time inputs for men and women who keep house and valuing the contributions by specific tasks performed with the prevailing wage rate for performance of similar tasks. The data were then analyzed in a regression framework so that controls for socioeconomic and demographic factors could be made.

Miller and colleagues have updated Peskin's estimates by substituting 1985 data on family structure, education, income, and race into the regression equation developed by Peskin to estimate hours spent on household labor (Douglass, Kenney, and Miller 1990). The hours were then valued on the basis of 1985 wage rates by activity. The resulting estimates, updated to 1992 using the percentage increase in hourly compensation in the business sector, are shown in Table 1.

Future Productivity Changes. In estimating the present value of lifetime earnings, future changes in the productivity of wage earners need to be taken into account. Real hourly compensation in **nonfarm** business and the business sector have fluctuated widely during the past three decades. Between 1970 and 1994, the annual rate of increase ranged **from** a decrease of 2.5 percent to an increase of 2.0 percent. In the **1990's**, the increase in real hourly compensation has been between .3 percent and 2.0 percent (U.S.

Bureau of the Census, 1995). An average annual increase in productivity of one percent is recommended for this model. Sensitivity analyses could be carried to analyze the implications of alternative assumptions.

Excluded costs. Several known costs are excluded from the model because data are unlikely to be available. For example, family members and friends may care for the victims of domestic violence. This may involve providing shelter and moral support, and it may involve the provision of other health and social services. This “informal care” cost may be significant, but there are no reliable data from which to make estimates do not exist. In addition, no attempt was made to capture the costs of pain and suffering.

APPLICATION OF THE MODEL

Ideally, application of the above model for direct costs of domestic violence requires data for each cost component (hospital care, emergency rooms, physician’s services, etc.) on the number of services used by victims of domestic violence and the cost per unit of service. Likewise, for morbidity costs, data would be available on the number of work loss and restricted activity days incurred by victims of domestic violence and their earnings per day. Unfortunately, such data are not readily available.

Following is a detailed description of the available data sources for each component of costs, including their limitations and possible applications. The available **datasets** for each component of the model are summarized in Table 3.

Direct Healthcare Costs

Hospital Care. The major comprehensive national source on hospital care is the *National Hospital Discharge Survey (NHDS)*, a continuing nationwide sample survey of short-stay hospitals in the United States conducted by the National Center for Health Statistics (NCHS). Hospitals with the most beds and/or discharges annually are selected with certainty; the remaining sample is selected using a three-stage stratified design. The basic unit of estimation for the *NHDS* is the sample patient abstract. Of the 528 hospitals selected for the survey in 1993, 513 were within the scope of the survey, and 466 participated in the survey. Data were abstracted from about 235,000 medical records. Data are collected on demographic characteristics of patients, admissions, length of stay,

diagnoses, and procedures. There is information on source of payment but no data on charges or costs.

Domestic violence assaults sometimes result in injuries that require hospitalization. The *NHDS* data does not currently permit one to analyze injuries by the external cause or intent of the injury as reflected in the International Classification of Diseases, 9th Revision, Clinical Modification (**ICD-9-CM**). Nor do the codes contain information regarding the relationship of the victim to the offender. Therefore, patients hospitalized due to domestic violence can not be identified in the *NHDS* and the data can not be used directly to estimate the number of hospitalized victims of domestic violence.

An indirect approach is to obtain information **from** smaller studies to estimate the proportion of short-stay discharges and length of stay for domestic violence that could be applied to the total number of hospitalizations due to injuries resulting from domestic violence and to apply average expense per patient day to obtain the total cost of inpatient hospitalization. Average expense per patient day for community hospitals are available from the American Hospital Association annual survey of hospitals as reported in *Hospital Statistics*.

The *National Medical Expenditure Survey (NMES-II)* is an alternative source of expense per patient day. This survey was conducted by the Agency for Health Care Policy and Research (AHCPR) in 1987 and 1988. The survey contains data on medical service use and expenditures, source of payments for health care, and health insurance coverage. Data were collected from both households and medical providers. While one cannot identify costs incurred related to domestic violence, it is an excellent source of per unit costs, such as per diem hospital expenses. The 1987 per unit expenditures from *NMES-II* could be updated using economic indicators (i.e. the hospital component of the Consumer Price Index).

Another source of national data on hospitalizations is the annual *National Criminal Victimization Survey (NCVS)* conducted by the Bureau of Justice Statistics. This is a stratified cluster sample of 110,000 people, aged 12 and over. Each housing unit remains in the sample for three years, with each of seven interviews taking place every 6 months. Separate reports are completed for each criminal incident which subjects have

experienced in the previous six months. Seventy five percent of interviews are conducted by telephone; the remainder are face to face interviews.

There are questions about hospitalization for injuries, medical insurance and medical expenses. The medical expenses question is all-inclusive, combining hospital and doctor bills, medicine, therapy, braces, and any other injury-related expenses. Since 1992, questions are asked about domestic or family violence but hospital expenses cannot be separated **from** the total medical expense. Questions on medical expenses may have reliability problems, especially for those whose expenses are paid by insurance and for whom bills are not available to the subject. Because only total medical expenses are collected, the cost of hospital services cannot be determined unless it is the only cost incurred.

The final source of data on hospitalization costs is the 1995 *Survey of Violence Against Women (SVAW)* conducted by the Center for Policy Research in Denver, Colorado. This is a national probability sample of 8,000 women generated through random-digit dialing. The survey is being conducted by telephone. Questions are asked about hospitalization for injuries, length of stay, and whether the victim received surgery, bone settings or stitches. Questions on medical expenses were not asked but source of payment was asked. Thus to use this survey, the data on hospitalizations would have to be augmented by hospital expense data available **from** the American Hospital Association or the *NMES*.

In addition to requiring hospital services for the treatment of injuries, victims of domestic violence may also be hospitalized for the treatment of substance abuse problems. Therefore, a proportion of the hospitalizations for substance abuse diagnostic codes, based on smaller studies, should be costed and attributed to domestic violence.

Recommendation: We recommend that both the *NCVS* and the *SVA W* be used to estimate the use of hospital services for domestic violence-related injuries. It would be important to obtain information from both these sources and to compare the results. The advantage of the *NCVS* is that data on hospitalizations, total medical expenses, and domestic violence are available from this source and the sample is larger than the *SVA W*. The latter survey, however, is specifically designed to develop national estimates of violence against women and has data on hospitalizations. We recommend that the *NMES-II* (updated) or *Hospital Statistics* be used for per diem costs. We recommend that the *NHDS*, in conjunction with the *AMES-II* (updated) or *Hospital Statistics*, be used to estimate the cost of hospitalizations for substance abuse treatment, and that a proportion of these costs also be attributed to domestic violence.

Physician Services. The major national population-based survey that reports information on physicians' services is the *National Ambulatory Medical Care Survey (NAMCS)* conducted by NCHS. *NAMCS* is a continuing national probability sample of ambulatory medical encounters in the offices of nonfederal employed physicians classified as "office-based patient care" physicians. A multistage probability design is employed in which 3,000 physicians were selected. The physician response rate was 71 percent in 1992 providing data on 34,606 patient records. Included are visits to physicians in solo, partnership, and group settings, and visits that occur in private, nonhospital-based clinics and health maintenance organizations (HMO's). Data are collected on physician specialty and on demographic characteristics of the patient, patient's complaints, physician's diagnosis, ambulatory surgical procedures, diagnostic screening and therapeutic services, medications, and duration of the visit. Expected source of payment is obtained but data on charges or costs are not available.

The diagnostic data are coded according to the ICD-9-CM codes and the principal reason for visits are coded according to Reason for Visit Classification for Ambulatory Care (**RVC**) codes, which includes psychiatric disorders as well as marital problems. Domestic violence, however, is not specifically indicated.

Employing an indirect approach to costing physician services, *NAMCS* could be used by estimating the proportion of physician visits due to injuries resulting from domestic violence from other studies and applying average charge per visit. Data on average charges are available from *Physician Marketplace Statistics* published annually by the American Medical Association, or the *NMES* as discussed above.

Another source of physician visit data is the *National Health Interview Survey (NHIS)*. *NHIS* is a continuing nationwide household sample survey conducted by the NCHS. Information is obtained on personal and demographic characteristics including race and ethnicity by self-reporting or as reported by an informant. Information is also obtained on illnesses, injuries, impairments, chronic and acute conditions, utilization of hospital and physician services, and other health topics. Charge data are not collected.

The *NHIS* sample design follows a multistage probability design in which about 49,000 households yielded a sample of 109,671 persons in 1992. The *NHIS* is coded according to the ICD-9-CM, including E-codes. While *NHIS* is the largest nationwide household survey on health, domestic violence as a reason for visit to the physician cannot be identified.

The *NCVS* conducted annually by the Bureau of Justice Statistics also is a source of data on medical expenses, including doctor bills. As noted above, the amounts for physician services cannot be isolated because an all-inclusive question on medical expenses is asked of respondents. However, identification of domestic or family violence is possible from this survey.

Finally, data on physician services are available from the 1995 *SVAW* conducted by the Center for Policy Research in Denver, Colorado. The number of visits is reported but no charge data are available. To use this survey, the data on physician visits would have to be augmented with physician expenditure data from the American Medical Association or the *NMES-II* (updated).

As is the case with hospitalizations, victims of domestic violence may use physician services for the treatment of substance abuse problems resulting from domestic violence. Therefore, a proportion of the visits for substance abuse problems, which are best

estimated in the *NAMCS*, should be attributed to domestic violence. The proportion should be derived from smaller studies.

Recommendation: We recommend that *NAMCS*, *NCVS*, and the *SVA W* be used for estimating the expenditures for physician services associated with domestic violence. *NAMCS* has excellent data on ambulatory care visits; *NCVS* has data on visits, total medical expenses, and domestic violence; while *SVA W* has data on domestic violence and medical visits. Data from the American Medical Association or the *NMES-II* (updated) should be used for per visit costs.

Emergency Department (ED) Visits. The *National Hospital Ambulatory Medical Care Survey (NHAMCS)* was first conducted by NCHS in 1992. This national probability sample survey contains data on more than 36,000 visits to emergency departments in non-Federal, short-stay, and general hospitals. Nationally, 34 million ED visits reported in 1992 were injury related (Burt, 1995). Data are collected and coded for up to three external causes of injury, whether or not the visit was injury related, and expected source of payment. Data on cost or charges are not included. The most recent revision of the survey, to be fielded in 1995/1996, contains a new question on the relationship of the person causing the injury to the victim for cases of interpersonal violence and assault. While data from this revision will not be available for several years, they will ultimately provide a valuable source of information on ED visits by victims of domestic violence.

Another source of ED visits is the *NHIS*, described above. Unfortunately, domestic violence as a reason for ED visits cannot be identified.

The *NCVS* conducted annually by the Bureau of Justice Statistics is a source of data on medical expenses, including ED visits. As noted above, the amounts for ED visits cannot be isolated because an all-inclusive question on medical expenses is asked of respondents. However, identification of domestic or family violence is available from this survey.

The cost of **ED** visits related to domestic violence could be obtained by estimating the proportion of visits due to domestic violence, including domestic violence-related

substance abuse, from other studies and applying average charge per visit. National average ED charges are available from the National Medical Expenditure Survey (*NMES-II*), which indicates that the average cost of an ED visit in 1987 was \$166 (Burt, 1995). This could be updated to the year of the study.

Finally, data on visits to **EDs** are available **from** the 1995 *SVAW* conducted by the Center for Policy Research in Denver, Colorado. The number of visits is reported but no charge data are available. To use this survey, the data on ED visits would have to be augmented with expenditure data **from** the *NMES-II* (updated). An important advantage of the *SVA* *W*s is that it permits one to determine the number of visits resulting from episodes of domestic violence.

Recommendation: We recommend that *NHAMCS*, *NCVS*, *NMES*, and the *SVA W* be used for estimating the expenditures for ED visits resulting **from** domestic violence. *NHAMCS* could provide national data on the prevalence of ED visits; *NCVS* has data on ED visits, total medical expenses, and domestic violence; *NMES* has data on the charges for ED visits; and the *SVA W* has data on domestic violence and ED visits.

Hospital-Based Outpatient (OP) Visits. OP visits can be estimated using the same methodology and data sources just described for ED visits, because data on the two types of visits are obtained at the same time in all the surveys. The *National Hospital Ambulatory Medical Care Survey (NHAMCS)* described above also contains data on hospital-based outpatient visit, which is defined to include nonurgent ambulatory care provided under the supervision of a physician in a hospital facility. For each visit, up to three external causes of injury are coded, as is whether or not the visit was injury related, and expected source of payment. As previously discussed, domestic violence cannot currently be identified as the reason for using OP services. However, when the 1995-1996 data are available this will be possible. Data on cost or charges are not included

The cost of outpatient visits related to domestic violence could be obtained by estimating the proportion of visits due to domestic violence **from** other studies and applying average charge per visit. National average OP charges are available **from** the

National Medical Expenditure Survey (NMES). The *NHIS* is also a source of OP visits with the caveat that domestic violence as a reason for the visit cannot be identified.

The *NCVS* contains data on whether care was received at a health unit, health clinic, or hospital/emergency clinic. The survey also permits the identification of domestic violence as the reason for the visit. However, expenditures for these visits cannot be isolated as discussed above.

Finally, data on OP visits are available from the 1995 *SVAW* conducted by the Center for Policy Research in Denver, Colorado. The number of visits is reported and it permits one to determine the number of visits resulting from episodes of domestic violence. However, because charge data are not included, one would have to use updated per visit expenditures from the *AMES-II*.

Recommendation: We recommend that *NHAMCS*, *NCVS*, *NMES-II* (updated) and the *SVAW* be used for estimating the expenditures for OP visits resulting from domestic violence. *NHAMCS* could provide national data on the prevalence of OP visits; *NCVS* has data on OP visits, total medical expenses, and domestic violence; *NMES* has data on charges for OP visits; and the *SVAW* has data on domestic violence and OP visits.

Other Professional Services. Other professional services including dental services, physical therapy, home care, and visiting nursing services, can be estimated from the *SVAW*. The survey asks whether services were used and if so, how many times.

The *NHIS* contains data on other professional services, but does not contain the detail of the *SVAW*. It also doesn't permit the identification of services used as a result of domestic violence.

Unit cost data can be obtained from the *NMES-II* (updated), or from the relevant professional associations if available.

Recommendation: We recommend using the *SVAW* to estimate the number of services used for each type of service. Alternatively, the *NHIS* could be used to obtain other professional services collectively. *NMES-II* (updated) should be used to estimate cost per service used.

Emergency Medical Services (EMS). Emergency medical services, including ambulance transportation and paramedic care used as a result of domestic violence, are only directly available from the *SVAW*.

An alternative approach would be to determine from smaller studies what proportion of hospitalized patients arrive by ambulance and apply this proportion to the number of hospitalizations associated with domestic violence.

NMES-II, updated to the year of the estimates, should be used for the cost per transport.

Recommendation: We recommend using the *SVAW* to estimate the number of domestic violence victims receiving emergency medical services, and the *NMES-II* (updated) for unit costs.

Mental Health Costs. Part II of this report, *Exploratory Paper on Mental Health Consequences on Domestic Consequences of, Domestic violence*, recommends the following elements that are needed to estimate the economic costs of the mental health consequences of domestic violence:

- accurate data on the prevalence of mental health problems of battered women, **functional** status of battered women, witnessing domestic violence among children of battered women, and mental health problems among children witnessing domestic violence;
- accurate estimates of use of mental health, hospital (inpatient and emergency room), medical, and social services for mental health problems by battered women;
- accurate estimates of unmet need for mental health care of battered women;
- accurate estimates of the costs of mental health care in the sectors used by battered women; and
- accurate estimates of lost productivity among battered women, including work productivity, child care, and other activities.

Also noted in Part II is the **difficulty** in interpretation of the research on mental health consequences of domestic violence with respect to prevalence of mental illnesses because of competing causal interpretations. Existing research suggests the clear need for accurate

estimates on the prevalence of mental health problems of battered women based on the following wide ranges of prevalence estimates:

- **depression--** 15% - 83%
- **suicidality--** 5% - 77%
- **substance abuse--** 7% - 29%
- **post-traumatic stress disorder--** 3 1% - 84%

The major source of national data on the prevalence of mental disorders in the United States is the National Institute of Mental Illness (**NIMH**)- sponsored *Epidemiologic Catchment Area Program Community Surveys (ECA)*. The survey is the largest and most comprehensive survey of mental disorders ever conducted in the United States. The *ECA* program comprises a series of five epidemiologic research studies performed between 1980 and 1984 by five independent research teams in collaboration with the **NIMH** Division of Biometry and Epidemiology. The five research studies were carried out by Yale University, Johns Hopkins University, Washington University, Duke University, and the University of California at Los Angeles. Many articles have been published from this **dataset** (see, for example, Regier et al., 1988, Regier et al., 1990, Rice et al., 1990).

Rice estimated the direct mental health care costs at \$42.5 billion in 1985, including care provided in mental health specialty and Federal institutions, short-stay hospitals, and nursing homes; other treatment costs- office based physicians, other professional services and drugs; and support costs (Rice et al., 1990). The costs of mental illness were updated to 1990 employing economic data and indices. The estimated direct costs of all mental illnesses for 1990 amounted to \$67 billion in 1990 (Rice and Miller, 1995). These mental illness costs have been aggregated to estimated amounts spent for care of persons with various types of mental disorders, such as affective disorders (Rice and Miller, 1995), schizophrenia (Rice and Miller, in press), anxiety disorders (DuPont et al., in press), obsessive compulsive disorder (DuPont et al., 1995), severe mental illness (National Advisory Mental Health Council, 1993). However, the direct costs of mental health care for care of victims of domestic violence have not been estimated.

A more recent large national survey of persons aged 15 to 54 years in the United States to determine the prevalence of mental disorders is the *National Comorbidity Survey*

conducted between September 1990 and February 1992 by the **staff** of the Survey Research Center at the University of Michigan (Kessler et al, 1994). Again, this survey cannot isolate psychiatric disorders resulting from domestic violence.

Cohen and Miller (1994) reported the results of a pilot survey of 168 mental health professionals to determine: (a) the number of crime victims receiving mental health counseling, by type of crime, and (b) the annual cost of treatment for each type of crime, number of victims served, and the total costs incurred in the calendar year 1991, regardless of when the victimization actually occurred--a prevalence-based approach.

Telephone interviews were conducted of random samples of members of eight selected professional organizations, including the American Psychiatric Association, American Psychological Association, National Association of Social Workers, American Association of Marriage & Family Therapy, American Association of Pastoral Counselors, American Mental Health Counselors Association, American Family Therapy Association, and American Society of Group Psychotherapy & Psychodrama.

Results of the survey are:

- An estimated 3.1 to 4.7 million crime victims received mental health care in 1991. Assault, including domestic violence, was measured, along with other types of crime (rape, robbery, burglary, kidnapping, arson, drunk driving, and other).
- The total value of counseling/treatment received amounted to an estimated \$8.3 - \$9.7 billion in 1991. Since only 70% of normal fees are actually paid, actual expenditures are estimated to be between \$5.8 and \$6.8 billion.
- Of this total, 353,000 - 412,000 persons were estimated to have suffered assault including domestic violence, amounting to a total value of \$572.7 - \$885.5 million.
- An additional 237,000 - 361,000 were estimated to have been the victims of attempted or completed rape, amounting to a total value of \$511.9 - \$863.0 million.
- Inflating Rice's estimates of the direct cost of mental illness (Rice, et al., 1990) to 1991, it is estimated that more than 12% - 14% of the total mental health care costs in the United States are for crime-related counseling.

We feel that the following limitations of the Cohen and Miller survey preclude the use of their figures and methodology: 1) potential bias of the sample because the organizations sampled do not represent 100% of all mental health professionals who might treat victims of crime and therefore are non-representative of all professionals; 2)

those who ultimately responded to the survey are not representative of the sample population; 3) it is not clear how the numbers were inflated to the totals; and 4) the study does not address unmet need for mental health care.

Data are available from the 1995 *SVAW* conducted by the Center for Policy Research in Denver, Colorado on prevalence of domestic violence, visits to psychologists, psychiatrists, or other type of mental health professional, and the number of times seen about the specific incident of domestic violence. To use this survey, the data on mental health care provider visits would have to be augmented with expenditure data from the American Psychiatric Association and other mental health professional associations or the *AMES-II* (updated).

Recommendation. We recommend that the *SVAW* be used for estimating expenditures for mental health costs associated with domestic violence. *SVAW* has excellent data on domestic violence and the number of times that the victim talked to a mental health professional. Unit cost data would be obtained from mental health professional associations and/or the *NMES-II* (updated).

Other Related Costs

Prevention and Research. The emergence in recent years of domestic violence as a major public health issue has focused attention on the need for preventing and understanding the causes and consequences of this serious epidemic. Public and private efforts at the national, state, and local levels are being mobilized to attempt to deal with the problem. The two reviews of the literature in Part I and Part II of this report, *The Cost of Domestic Violence to the Health Care System: A Review of the Literature* and the *Exploratory Paper on Mental Health Consequences of Domestic Violence*, indicate the wide range of interests and suggest that efforts are being undertaken to prevent, treat, and understand the domestic violence phenomenon.

The Centers for Disease Control and Prevention is currently fielding the *Inventory of Services and Funding Sources for Programs Designed to Prevent Violence Against Women* (Westat, 1996). This survey is being completed by state government agencies and state coalitions to provide data on services and expenditures related to domestic violence

and sexual assault. It will also contain estimates of services provided by local agencies and nonprofits.

Recommendation: We recommend that the CDC *Inventory of Services and Funding Sources for Programs Designed to Prevent Violence Against Women* be used to estimate expenditures for prevention and research activities.

Social Service Costs. Social services include a wide array of services, providers, settings, and **funders** making the calculation of the cost of social services due to domestic violence particularly difficult. Examples of social services as they relate to domestic violence may include counseling, shelter care, therapy, child and adult protective services, foster care, information, education, and referral services, residential care, and others. Providers may include social workers, social work aides, therapists, counselors, psychologists, administrators, etc. Services may be provided in a variety of settings including homeless shelters, clinics, general and mental hospitals, schools, religious organizations, private offices, health maintenance organizations, prisons, mental health and community centers. Finally, services are funded by federal, state, and local governments, private philanthropic and religious organizations, and direct out-of-pocket payments.

Federal policy has been restricted to providing support for the emergency and short-term needs of victims of domestic violence and their dependents. The Family Violence Prevention and Services Act of 1984 has provided **funds** for states to primarily support temporary shelter for battered women. The Victims of Crime Act of 1984 has given priority to victims of spousal abuse for compensation of crime-related costs. The major activities, however, are at the state level. States now provide about one-third of the funding for battered women's services and act as brokers for another third **from** the federal government. States have also begun to ensure the quality of services through some form of regulation of shelters (Davis, 1995).

The Violence Against Women Act passed in 1994 has **funded** a number of initiatives related to domestic violence. For example, Health and Human Services has awarded \$32.6 million in 1995 to states to provide shelter services to victims of domestic violence (HHS, 1996). Also included is funding for alcohol and substance abuse

prevention and counseling programs. A number of other programs for education, community programs, and other services have been authorized but not fully funded under the current budget. The CDC *Inventory of Services and Funding Sources for Programs Designed to Prevent Violence Against Women* currently being conducted will contain data on state, local, and nonprofit agency expenditures including shelters, hotlines, support groups, advocacy programs, training, education, transitional housing, and treatment programs.

The Commonwealth Fund is currently undertaking a project entitled "The Identification of Types of Programs for Battered Women". Preliminary findings indicate that there were 1,268 shelters for battered women in the U.S. in 1994 providing a total of 25,074 beds, or 32 beds per 100,000 women age 18 to 64 (Commonwealth Fund, 1995).

The Agency on Children and Families has indicated a willingness to survey the states to obtain data on expenditures for battered women's services (Riley, 1996).

Data are available on emergency and transitional shelters for homeless families from the 1988 U.S. Department of Housing and Urban Development (HUD) *National Survey of Shelters for the Homeless* (Rossi, 1994). This national survey provided data on the characteristics of the residents of the shelters as well as their structural and financial characteristics, including costs. Victims of domestic violence, however, are not identifiable.

A new *National Survey of Homeless Assistance Providers and Clients* is being conducted in 1996 by the U.S. Bureau of the Census, with funding from 12 federal agencies. The survey is being conducted in two phases: 1) a telephone survey of providers to obtain information on the types of programs and services provided to homeless persons; and 2) a survey of a sample of clients in emergency shelters, soup kitchens, outreach programs, and other locations where assistance is provided to provide data on the characteristics of the homeless population who use services. Phase one is currently underway; phase two will be conducted in October and November 1996. Victims of domestic violence will be identifiable.

Children may be placed in foster care or child protective services as the result of domestic abuse between adults. Under Title IV-E of the Social Security Act, states are

partially reimbursed for payments to foster parents who care for AFCD-eligible children in state custody. The federal matching rate for foster care maintenance payments is the same as the rate used in AFCD and Medicaid; the federal share of total foster care under Title IV-E was estimated at \$2.6 million in fiscal year 1993 (Everett, 1995).

Several local (Appel, 1990; Knickman et al, 1989; McCourt and Nyden, 1990; Owen et al, 1992;) and statewide studies (Knickman et al, 1989) and one national study by the Ford Foundation (Schneider, 1991; U.S. Department of Housing and Urban Development, 1988; Xorza, 1991;) provide data on the percentage of the homeless population which is comprised of women and children and calculates what percentage of those shelter clients became homeless as a result of domestic violence *SVAW* contains questions about where the victim stayed if they **left** their spouse/partner. This question may allow for a calculation of an estimate of how many women who are battered leave their homes and seek **refuge** in a shelter. This calculation is likely to be low since the *SVAW* sample does not include women presently in battered women or homeless shelters.

The Department of Health and Human Services began operating a National Domestic Violence Hotline in February of 1996. The hotline has been funded with \$3 million from 1995 to 2000.

Recommendation: We recommend using the CDC *Inventory of Services and Funding Sources for Programs Designed to Prevent Violence Against Women* to estimate expenditures by state, local, and nonprofit agencies for social services related to domestic violence. We recommend using the new 1996 *National Survey of Homeless Assistance Providers and Clients* (if available) and the Commonwealth Fund project data (if available) as additional data sources for estimating costs of care for victims of domestic violence who are housed and served in shelters. If data are not yet available **from** these surveys, we recommend using *SVA W* to estimate the number of women in shelters due to domestic violence and costs (updated) from the 1988 *National Survey of Shelters for the Homeless*. We recommend using a proportion of Title IV-E expenditures to estimate the cost of domestic violence to the foster care system.

Criminal Justice. The cost to the criminal justice system of domestic violence would be calculated **from** several **different** data sources. There are no existing major national sources of data which could alone be used to calculate the criminal justice costs of domestic violence.

The Department of Justice has received Congressional authorization to fund several programs under the Violence Against Women Act of 1994, including the STOP (Services, Training, Officers, Prosecutors) Violence Against Women Grant program, the COPS (Community Oriented Policing to Combat Domestic Violence) program, and increased numbers victim counselors, training programs, national stalker reduction programs, and others (HHS, 1996). Unfortunately, these programs have been **funded** in the current budget cycle.

The *SVA W* can be used to calculate the percentage of those women who were victims of domestic violence who reported the violence to the police. An estimate of the number of calls to the police can be generated by combining this data with data on the

prevalence of domestic violence. Questions are asked about whether the victim obtained a restraining order, whether criminal charges were ever filed as a result of the incident, whether the case resulted in a conviction and how many years in jail or prison the perpetrator received. Though these questions may have reliability problems for the calculation of the actual amount of police, court and prison resources used, they represent the best available data to estimate the amount of criminal justice resources in each area which are **utilized** on cases of domestic violence.

The *NCVS* contains data similar to the *SVAW*. The *NCVS* asks whether the police were called, whether the perpetrator was arrested, and whether criminal charges were brought against the perpetrator. The National Family Violence Survey (*NFVS*) conducted by Gelles and Straus in 1975 and 1985, is a national probability sample of 6,000 adults (Straus, Gelles, and Smith, 1990; Straus and Gelles, 1986). The *NFVS* asks whether the police were called within the last year as a result of an incident of domestic violence, whether the perpetrator was arrested, whether and how many cases went to court and how the case was resolved. The *NFVS* and *NCVS* can be used as a reliability check for the estimates of calls to police, arrests and the result of cases brought to court generated from the *SVAW* and *NCVS* data.

Smaller local studies provide data relevant to the criminal justice costs of domestic violence. The Report on the District of Columbia Police Response to Domestic Violence provides data on the percentage of domestic violence calls which resulted in arrest, the percentage of calls to 911 which were about domestic violence incidents and the percentage of restraining orders which were obtained by women against former intimates. A study of domestic violence arrests in New York City in 1989 calculated the average cost of arrests for domestic violence offenses, including the cost of police time, and detention time arising from the arrests (NY State Committee on Investigations, Taxation, and Governmental Operations, 1993).

The costs of incarceration would have to be generated from different sources. The Department of Justice provides the number of state inmates who are incarcerated as a result of a domestic violence offense (U.S. Department of Justice, 1994). They also provide the cost of incarceration per inmate.

The Department of Justice also has studied the rate of arrests for spousal murder (U.S. Department of Justice, 1995). This study reports on the findings of the analysis of a sample of 540 defendants in 33 of the nation's largest counties. The study reports on the outcomes of the cases, length of sentence of those convicted and the average length of processing time for each case. These data could be used to calculate court costs. Unfortunately, there are no comparable data for domestic violence assault cases.

Recommendation: We recommend using the *SVAW*, supplemented by the *NCVS* and *NFVS* as the primary data sources on the use of criminal justice services. Smaller studies, including those discussed above, should be used to estimate the cost of these services.

Indirect Costs

Indirect costs are calculated using the human capital approach. Morbidity is the value of days lost from productive activities due to domestic violence, and mortality is the value of the lives lost prematurely as a result of domestic violence. In each case, time lost is multiplied times a value which includes lost market earnings and an imputed value for housekeeping services. Mean annual productivity, including a value for market earnings and imputed household production for people in the labor force, and an imputed value for household production, is calculated for each five year age group by gender. This is then used to generate the present value of lifetime earnings needed for valuing mortality. Productivity is assumed to increased by one percent each year based on historical patterns.

Mean earnings by age and gender are available from the U.S. Bureau of the Census (1993). The assumption is that the cross-sectional earnings profile obtained at a given point in time can be used to generate the time series profile. In other words, someone who is 40 years old today can expect to earn in ten years what today's 50 year old is earning today. It is also necessary to know what proportion of people would be in the labor force. Labor force participation rates are available from the U.S. Department of Labor (1993).

The value of household production is available from Miller and colleagues (Douglass, Kenney, and Miller, 1990). Values are imputed separately for those in the labor force and for those involved primarily in household production.

Recommendation: We recommend that the value of productivity be estimated using the latest data available, at this time 1993. A productivity increase of 1 percent should be assumed, and future productivity should be discounted at 4 percent. Sensitivity analyses should be carried out at alternative discount rates.

Morbidity. The estimation of the morbidity cost of domestic violence requires data on the number of days lost **from** productive activity. The *NCVS* conducted annually by the Bureau of Justice Statistics contains data on the amount of time lost **from** work due to domestic violence, including time lost due to injuries and time lost for other activities including police and court related activities. The survey **further** queries as to the amount of pay lost as a result. Incidents of domestic violence are identified in this survey by the relationship of the offender. However, data on time lost from activities other than paid employment are not collected.

The best source of data on days lost is the 1995 *SVAW*. For each incidence of domestic violence reported, the respondent is asked to report how many -days were taken off **from** “work for which you were getting paid, child care or household chores, school, volunteer activities, or social/recreational activities”. The annual **value** of productivity described above is converted to a daily value and multiplied by the number of days lost due to domestic violence.

Recommendation: We recommend that the *NCVS* and the *SVAW* be used to estimate days of lost productivity. The *NCVS* *can* be used for work-loss days, and the resulting estimate compared to one derived **from** the *SVAW*. The *SVAW* can be used for time lost **from** work as well as other activities.

Mortality. Most of the **datasets** relevant to the study of domestic violence are surveys of victims. Unfortunately, these are of no use in determining the number of deaths resulting **from** domestic violence **because murder** victims are not able to participate in

surveys. The only national **dataset** on the number of deaths resulting **from** domestic violence is the *Uniform Crime Reports(UCR)*, compiled by the U.S. Department of Justice, FBI based on reports from local law enforcement agencies. Fatalities linked to domestic violence are identified by the relationship of the offender to the victim. The age and gender of the victim can be obtained, and multiplied by the present value of lifetime earnings for someone of the same age and gender to obtain mortality cost.

Recommendation: We recommend that the *UCR* be used for the prevalence of deaths **from** domestic violence. The present value of lost productivity by age and gender can then be applied to the deaths to estimate mortality costs.

CONCLUSION

This report develops a theoretical model for estimating the economic cost of domestic violence. Available **datasets** are critically reviewed for their potential usefulness in estimating the model. The components of the model and the best available data for estimating them are summarized in Table 3.

A number of conclusions emerge from this analysis:

- Domestic violence is far-reaching in its economic consequences, impacting the healthcare system, the mental health system, the social service system, and the criminal justice system.
- The data that are currently available suffer **from** several flaws which limit their usefulness for estimating the cost of domestic violence and necessitate a large number of assumptions in order to develop estimates.
- A number of **datasets** focus on the use of healthcare, including mental health services, but do not permit one to identify when the use of services results from an episode of domestic violence. Included here are the *National Ambulatory Care Survey*, the *National Health Interview Survey*, the *National Hospital Ambulatory Care Survey* (data currently available), the *National **Hospital** Discharge Survey*, and the *National Medical Expenditure Survey*.
- Other **datasets** are derived from the criminal justice system, contain good data on reported incidents, and permit estimates of the number of episodes of domestic violence. However, these **datasets** do not contain data on the use of services and/or costs. Included here are the *National Criminal Victimization Survey*, the *National Family Violence Survey*, and the *Uniform Crime Reports*.
- Data are particularly lacking in the areas of social services and criminal justice services resulting from domestic violence.

- A new survey, the 1995 Survey of *Violence Against Women* being conducted by the Center for Policy Analysis in Denver, is very promising for estimating the prevalence of domestic violence and use of medical and mental health services. It is the only nationally representative survey that combines identifiable data on incidents of domestic violence with the resulting use of services including health, mental health, and social services. *SVA W* would need to be augmented with cost data obtained from other sources.

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Table 1. Selected Economic Variables Used in Estimating Indirect Costs, by Age and Gender, 1992

Age in years	<u>Proportion of population with earnings</u>		<u>Annual mean earnings (\$)</u>		<u>Annual mean value of housekeeping services (\$)</u>			
					<u>In labor force</u>		<u>Not in labor force</u>	
	Males	Females	Males	Females	Males	Females	Males	Females
Under 1	0.0000	.0000	0	0	0	0	0	0
1 - 4	0.0000	.0000	0	0	0	0	0	0
5 - 9	0.0000	.0000	0	0	0	0	0	0
10 - 14	0.0000	.0000	0	0	0	0	0	0
15 -19	0.4210	.3910	14,846	14,623	2,296	5,751	5,628	12,228
20-24	0.8330	.7120	21,611	19,368	3,477	6,663	6,810	13,139
25 - 29	0.9320	.7440	30,503	25,849	4,023	8,805	7,354	15,282
30-34	0.9440	.7380	38,489	29,185	4,492	10,287	7,824	16,765
35 - 39	0.9420	.7560	45,407	30,901	4,779	10,714	8,111	17,192
40 - 44	0.9330	.7820	49,414	30,850	4,921	10,346	8,253	16,824
45-49	0.9220	.7580	52,446	31,561	4,941	9,602	8,273	16,080
50 - 54	0.8900	.6870	50,561	30,164	4,941	9,602	8,273	16,080
55 - 59	0.7890	.5680	41,439	28,430	5,068	9,594	8,400	16,070
60-64	0.5470	.3650	44,338	27,976	5,068	9,594	8,400	16,070
65 -69	0.2590	.1620	44,036	24,609	5,068	9,353	8,400	15,669
70 - 74	0.1500	.0820	53,236	22,033	3,609	6,660	5,981	11,156
75-79	0.0920	.0420	35,801	18,548	2,454	4,528	4,067	7,586
80 - 84	0.0600	.0210	29,857	15,678	1,426	2,631	2,362	4,407
85 & over	0.0380	.0140	24,927	13,259	807	1,489	1,338	2,495

Table 2. Present Value of Lifetime Earnings by Age, Gender, and Discount Rate, 1992
(dollars)

Age	Males			Females		
	<u>2.0%</u>	<u>4.0%</u>	<u>6.0%</u>	<u>2.0%</u>	<u>4.0%</u>	<u>6.0%</u>
Under 1	1,174,844	540,496	266,965	935,418	438,501	222,167
1 - 4	1,207,409	583,109	302,060	960,870	472,838	251,248
5 - 9	1,264,125	666,246	376,014	1,005,589	540,030	312,633
10 - 14	1,329,488	772,138	479,322	1,057,268	625,674	398,408
15 - 19	1,383,643	878,501	593,485	1,090,748	703,230	485,386
20 - 24	1,392,669	950,129	684,166	1,074,606	739,115	539,655
25 - 29	1,339,809	967,391	730,411	1,005,998	726,223	551,397
30 - 34	1,234,571	935,265	734,474	903,020	678,513	531,583
35 - 39	1,086,645	858,876	698,385	780,158	607,701	489,820
40 - 44	906,233	744,239	624,795	645,701	519,884	430,309
45 - 49	703,411	597,788	516,717	507,196	420,932	357,186
50 - 54	495,242	433,218	383,990	372,678	317,684	275,684
55 - 59	306,461	274,150	247,882	251,866	219,586	194,239
60 - 64	162,855	147,532	134,871	154,264	136,819	122,803
65 - 69	81,016	73,953	67,993	86,717	77,907	70,665
70 - 74	40,266	37,359	34,865	46,380	42,247	38,763
75 - 79	17,167	15,989	14,958	23,260	21,517	20,005
80 - 84	8,412	7,957	7,543	10,999	10,357	9,777
85 & over	2,450	2,392	2,335	2,659	2,595	2,534

Note: Assumed Annual Growth in Productivity of 1%

Table 3. Summary of Data Sources for Cost Estimation

<u>Cost Component</u>	<u>Prevalence</u>	<u>Data Source for:</u>	<u>Cost per Unit</u>	<u>Comments</u>
Hospital Care	<p><i>NCVS</i> - hospitalizations for injuries resulting from domestic violence</p> <p><i>SVA W</i> - hospitalizations for injuries resulting from domestic violence</p> <p><i>NHDS</i> - hospitalizations for substance abuse.</p>	<i>NMES-II</i> (updated) or <i>Hospital Statistics</i> for per diem costs		Need to determine proportion of hospitalizations for substance abuse for domestic violence
Physician Services	<p><i>NAMCS</i> - data on ambulatory care visits for injuries, substance abuse</p> <p><i>NCVS</i> - data on visits for domestic violence</p> <p><i>SVA W</i> - data on visits for domestic violence</p>	AMA data or the <i>NMES-II</i> (updated) data on cost per visit		Need to determine proportion of : visits in the <i>NAMCS</i> for domestic : violence and proportion of visits : for substance abuse as a : result of domestic violence
Emergency Department Visits	<p><i>NHAMCS</i> - data on ED care visits for injuries and substance abuse</p> <p><i>NCVS</i> - data on ED visits for domestic violence</p> <p><i>SVAW</i>- data on ED visits for domestic violence</p>	<i>NMES-II</i> (updated) - data on the cost per visit		Need to determine proportion of visits in the <i>NHAMCS</i> for domestic violence and proportion of visits for substance abuse from domestic violence
Hospital-Based Outpatient Visits	<p><i>NHAMCS</i> - data on OP care visits for injuries and substance abuse.</p> <p><i>NCVS</i> - data on OP visits for domestic violence</p>	<i>NMES-II</i> (updated) - data on the cost per visit		Need to determine proportion of visits in the <i>NHAMCS</i> for domestic violence and proportion of visits for substance abuse from domestic violence

<u>Cost Component</u>	<u>Prevalence</u>	<u>Data Source for:</u>	<u>Cost per Unit</u>	<u>Comments</u>
	<i>SVA W</i> - data on OP visits for domestic violence			
Other Professional Services	<i>SVAW</i> - data on dental services, physical therapy, home care, visiting nursing services due to domestic violence	<i>NMES-II</i> (updated) - data on the cost per unit of service		Need to determine proportion of services used in the NHIS that result from domestic violence
	<i>NHIS</i> - data on other professional services (can't break down by type) due to injury and substance abuse			
Emergency Medical Services	<i>SVAW</i> - data on ambulance transportation and paramedic services used as a result of domestic violence <i>NHIS</i> - number of hospitalizations as discussed above	<i>AMES-II</i> (updated) - data on the cost per EMS run		If use the NHIS , then need to determine proportion of hospitalized patients who would have arrived by ambulance
Mental Health Costs	<i>SVAW</i> - data on mental health services used due to domestic violence	<i>NMES-II</i> (updated) or data from mental health professional associations on cost per visit or service used		
Prevention and Research		<i>CDC Inventory of Services and Funding Sources for Programs Designed to Prevent Violence' Against Women</i>		Estimates of expenditures for prevention and research activities to be obtained from the 1996 CDC Inventory

<u>Cost Component</u>	<u>Prevalence</u>	<u>Data Source for:</u>	<u>Cost per Unit</u>	<u>Comments</u>
Social Service Costs	<i>NSHAP</i> - number of victims in shelters due to domestic violence <i>SWAW</i> - data on number of women who use shelters due to domestic violence	<i>NSSH</i> - cost of shelter care Title IV-E expenditures for foster care		Need to determine proportion of women in homeless shelters due to domestic violence. Need to determine proportion of children in foster care due to domestic violence
Criminal Justice System Costs	<i>SVA W</i> - data on number of police calls and charges filed due to domestic violence <i>NCVS</i> - data on number of police calls, charges filed, and case resolution due to domestic violence <i>NFVS</i> - data on number of police calls, charges filed, and case resolution due to domestic violence <i>DOJ</i> - number of state inmates due to domestic violence, court processing time for offenders	Regional studies (examples cited in text) <i>DOJ</i> - cost per incarceration		
Morbidity	<i>SVA W</i> - days lost from work and other activities <i>NCVS</i> - work-loss days	Present value of lifetime earnings (details described in text)		
Mortality	<i>UCR</i> - deaths due to domestic violence	Present value of lifetime earnings (details described in text)		

Note: The following abbreviations are used in the table:

CDC - Centers for Disease Control
DOJ - Department of Justice dataset
NAMCS - National Medical Care Survey
NCVS - National Criminal Victimization Survey
NFVS - National Family Violence Survey
NHIS - National Health Interview Survey
NHAMCS - National Hospital Ambulatory Medical Care Survey
NHDS - National Hospital Discharge Survey
NMES - National Medical Expenditure Survey
NSHAPC - National Survey of Homeless Assistance Providers and Clients
NSSH - National Survey of Shelters for the Homeless
SVAW - Survey of Violence Against Women
UCR - Uniform Crime Reports

APPENDIX
DESCRIPTION OF DATA SOURCES

National Ambulatory Medical Care Survey (NAMCS)

Sponsor: Division of Health Care Statistics of the National Center of Health Statistics, Centers for Disease Control and Prevention

Periodicity: Annual

Purpose: To estimate the utilization of ambulatory medical care services provided by office-based physicians in the United States. Utilization of ambulatory medical care services is obtained in terms of 1) patient characteristics, 2) physician practice characteristics, 3) patient's reason for visit, and 4) physician's diagnosis and treatment.

Design: Multi-stage probability involving 3,000 physicians. Basic sampling unit is the physician-based office visit. Target population includes office visits made in the United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office-based, patient care practice, but not in anesthesiology, pathology, or radiology. Included are visits to physicians in solo, partnership, and group settings, and visits that occur in private, nonhospital-based clinics and health-maintenance organizations (HMOs). Excluded are visits made to hospital-based clinics and government-operated facilities, telephone contacts, and nonoffice visits.

Mail and telephone contacts were used to enlist sample physicians, and were followed by a personal interview during which the physician's eligibility for the study was determined. A short instructional session was held with the physician and office staff who would assist with data collection. Data collection forms were the Patient Log and the Patient Record. 1991 NAMCS responding sample physicians completed 33,795 Patient Records, the instrument used to record information about patients' office visits. Data on ambulatory surgical procedures were classified and coded according to the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*. Quality control was implemented with two-way 100 percent independent verification procedures, and coding discrepancies were reviewed and adjudicated.

Content: Data are collected on physician specialty, demographic characteristics of the patient, patient's reasons for visit, physician's diagnosis, treatment, medications, and duration of the visit. New items in 1991 included injury-related office visits, patients current cigarette-smoking habits, and if patient had any of 4 chronic conditions--depression, hypertension, hypercholesterolemia, and obesity--at the time of the visit.

Injury Data: Included question "Is this visit injury-related?"

Utilization of Health Services: Questions included

- Was patient referred for this visit by another physician?
- Physician's diagnoses
- Have you or anyone in your practice seen patient before?
- Ambulatory surgical procedures

Diagnostic/screening services

Therapeutic services

Medication

Disposition this visit (recommendation for follow-up or referral to
another physician or hospital)

Duration of visit

Cost: Data on charges or costs not available. Expected source of payment is obtained.

Work loss: None

Psychological consequences: Visits that are **ICD-9-CM** coded mental disorders

Law Enforcement: None

Comments: Data on charges or costs not available. Data on average charges available from *Physician Marketplace Statistics* could be applied to estimates from other studies of the proportion of physician visits due to injuries **from** domestic violence.

No formal attempt was undertaken to determine or measure systematic bias.

National Crime Victimization Survey (NCVS)

Sponsor: U.S. Department of Justice Bureau of Justice Statistics

Periodicity: Annual

Purpose: To report on criminal victimization, both completed and attempted. Offenses measured include personal crimes of rape, robbery, assault, and larceny and the household crimes of burglary, larceny, and motor vehicle theft. Examines the frequency and impact of crimes, characteristics of victims and offenders, circumstances surrounding crimes, and patterns of reporting to the police.

Design: Stratified multi-stage cluster sample of **110,000** people, age 12 and older. Sample is constituted of U.S. residents living throughout the country, including persons living in group quarters. Crew members of merchant vessels, Armed Forces personnel living in military barracks, and institutionalized persons were not included in the survey. Approximately 60,500 housing units and other living quarters were designated for the sample.

Each housing unit remains in the sample for 3 years, with each of seven interviews taking place every 6 months. Household members are interviewed directly, and proxy respondents are allowed in certain situations. An NCVS interviewer's first contact with a selected housing unit is in person, and there is an effort to secure face-to-face interviews with all eligible members of the household; telephone interviews are permissible thereafter. About 75% of interviews are conducted by telephone. Separate reports are completed for each criminal incident which subjects have experienced in the previous six months.

Content: Estimates of rates of criminal victimization are generated for each offense category. The report includes the following categories:

- General Crime Statistics
- Victim characteristics
- Crime characteristics
- Offender characteristics
- Household characteristics
- Type of Crime
- Reporting to police

Injury Data: Includes questions about injuries and need for medical treatment.

- Was victim injured?
- By a weapon?
- Which injuries?
- Extent of injury necessitated medical treatment?

Utilization of Health Services: Includes questions about receipt of medical services, hospitalization, medical insurance and medical expenses resulting from incident.

Where was care received?

Did victim stay in the hospital?

How long?

Was victim covered by medical insurance?

What was the total amount of medical expenses?

Cost: Medical expenses question includes all injury-related expenses. Hospital expenses cannot be separated from the total medical expense. NCVS only measures direct costs to victims.

Work loss: Includes questions about major activity, employment status, type of work and loss of work-time as a result of incident.

Did victim have a job?

What was the victim's major activity?

For whom did the victim work?

What kind of business?

What kind of work?

What were most important duties on the job?

Employee of private company, government or self-employed?

Did victim lose time from work?

How much?

Did victim lose pay (uncovered)?

Did victim lose time from work because of related activities
(police or court related)?

Any other members of the family lose time from work as a
result of the incident?

How much?

Psychological consequences: None

Law Enforcement: Includes questions on reports to the police and police action.

Comments: Up until 1992, there were no specific questions which ask about domestic or family violence. The nature of the crime is determined through separate questions about type of crime and characteristics of offender, i.e. an assault by a spouse is categorized as an incident of family violence. This created problems from the standpoint of definitions and reporting. The NCVS has changed its methodology and now more directly asks respondents about family violence.

Since 75% of respondents were interviewed by phone, there are possible reporting biases which could result from the presence of the spouse at the time of interview. They do have a question about who is present during the interview.

There are no data on severity of injury, no data on type of treatment. There are questions about hospitalization for injuries, medical insurance, and medical expenses. The medical expenses question is all-inclusive, combining hospital and doctor bills, medicine, therapy, braces, and any other injury-related expenses. Questions on medical expenses may have reliability problems for those whose expenses are paid by insurance and for whom bills are not available. There are no data on **disability** other than work loss.

Recall bias is a major source of nonsampling error. Assault is recalled with the least accuracy of any crime measured by the NCVS, and may be related to the tendency of victims to not report crimes committed by offenders who are known to the victims, especially relatives.

National Family Violence Survey (NFVS)

Sponsor/PI: Gelles and Straus

Periodicity: 1975 & 1985

Purpose: (1) To develop national population estimates of intra-family violence. (2) Generate comparisons of the incidence of intra-family violence by race and ethnicity. (3) Generate state-by-state estimates of incidence of intra-family violence.

Design: National area probability sample of 6,002 adults based on distribution of the adult population of the United States generated through random-digit dialing. The sample included married or cohabiting couples, single parents with children under 18 living in the household, and persons who had been married or living together with a-partner of the opposite sex within the last two years. The survey was conducted by telephone.

Content: Estimates of rates of family violence including child abuse and spousal violence.

Includes questions about:

- styles of discipline
- history of family violence
- conflict resolution styles
- violence against children in past 12 months
- spousal/domestic** violence in past 12 months
- sexual assault in past 12 months
- Household characteristics
- Reporting to police
- Hospital/doctor visits

Injury Data: Includes questions about injuries and hospitalization.

Was either partner injured?

Did victim seek medical treatment?

Utilization of Health Services: Limited scope of questions, which include:

Where was care received? How many times?

Did victim stay in the hospital?

Cost: Includes questions on medical expenses, but they may have reliability problems for those whose expenses are paid by insurance.

Work loss: Includes questions about employment status, type of work and **loss of** work-time as a result of incident.

Did victim have a job?

Did incident effect job performance?

Did victim lose time from work?

How much?

Law Enforcement/Criminal Justice: Includes questions on number of times the police were contacted, arrests, whether cases went to court, and the result of cases.

Psychological consequences: Questions about changes in physical and mental health from before the commencement of violence, help seeking behavior, symptoms of psychological distress, alcohol and drug consumption.

Comments: The NFVS provides data useful for calculating the prevalence of domestic violence among married or cohabiting couples. Although single parents with children under 18 living in the household, and persons who had been married or living together with a partner of the opposite sex within the last two years are included in the sample, married or cohabiting couples compose 87% of the sample. Such a sample cannot be used to calculate the prevalence of domestic violence in the population as a whole since it neglects victims of domestic violence who do not fall into these categories-- persons who do not live with their partner or whose relationship was officially dissolved more than two years before yet maintain a relationship. Since respondents were interviewed by phone, there are possible reporting biases which could result from the presence of the spouse at the time of interview.

The data on medical care does not establish the number of days spent in a hospital. It is impossible to determine how many incidents of violence resulted in injury, medical treatment or hospitalization. There are no data on types and duration of treatment, medication or monetary cost of treatment. There are no data on severity of injury, no data on type of treatment. Questions on medical expenses may have reliability problems for those whose expenses are paid by insurance. There are no data on disability other than work loss.

National Health Interview Survey (NHIS)

Sponsor: National Center for Health Statistics, Division of Health Interview Statistics, Centers for Disease Control and Prevention.

Periodicity: Continuous survey to produce annual estimates

Purpose: To estimate incidence of acute conditions, episodes of persons injured, restriction in activity, prevalence of chronic conditions, limitation of activity due to chronic conditions, respondent-assessed health status, and the use of medical services.

Design: Multistage probability design that permits a continuous sampling of the resident noninstitutionalized population of the United States. Each week a probability sample representative of this population is interviewed by personnel of the U.S. Bureau of the Census. Interview sample for 1993 consisted of 43,007 households containing 109,671 persons. Response rate has been between 95 and 98 percent. Most households are contacted by mail before the interviewers arrive for face-to-face interviews. When possible, all adult family members participate in the interview; proxy responses are accepted for absent **family** members, and are required for all children and any adult who is incapable of responding for him/herself. Data are obtained on the personal, sociodemographic, and health characteristics of the family members and unrelated individuals living in these households. **NHIS** is coded according to the *International Classification of Diseases, 9th Revision*.

To reduce the amount of recall bias, NHIS uses a **2-week** reference period in collecting data on incidence of acute conditions, restriction in activity due to a health problem, and physician contacts. Either a 12 or 16 month reference period is used for hospitalization data. Short-term hospitalization is based on a 6-month reference period.

Content: Incidence of acute conditions, prevalence of chronic conditions, persons limited in activity due to chronic conditions, restriction in activity due to impairment or health problems, and utilization of health care services involving physician care and **short-stay** hospitalization. Beginning in August 1987 questions about knowledge and attitudes about acquired immunodeficiency syndrome (AIDS) were added.

Injury Data: Includes questions about illness and injuries, hospitalization resulting from incident.

Has anyone in the family had an injury **from** an accident or other cause?
What was the injury?
As a result, did subject/anyone see or talk to a medical doctor . . .
 have to cut down on usual activities for more than half of a day?
Did person receive medical treatment?
Where?

Utilization of Health Services: Questions included physician contacts, place of contact, interval since last physician contact, hospitalization, length of stay

How many times did subject see or talk to a medical doctor?

Did anyone in the family receive health care at home or go to a doctor's office, clinic, hospital or some other place?

How many times did subject receive this care?

Where did subject receive health care, or was it a telephone call

Did subject actually talk to a medical doctor

What kind?

For what condition?

Did subject stay in the hospital?

How long?

... have any kind of operation, including bone settings and stitches?

Cost: Survey asks only for dollar amount that subject/family spent on direct medical care (excluding prescriptions, insurance premiums, or any reimbursable costs).

Work loss: Includes questions about employment status, and loss of work-time as a result of illness or injury.

Did subject have a job?

Did subject miss time from work/school because of illness or injury?

How much?

Did subject stay in bed because of illness or injury?

How much?

Psychological consequences: Hospitalization and visits that are ICD-9-CM coded mental disorders

Law Enforcement: None

Comments: No questions for medical expenses covered by public or private insurance. NIHS is the largest nationwide household survey on health, but domestic violence as a reason for physician or hospital visit cannot be identified.

National Hospital Ambulatory Medical Care Survey (NHAMCS)

Sponsor: National Center for Health Statistics, Division of Health Care Statistics, Centers for Disease Control and Prevention.

Periodicity: Annual (since 1991)

Purpose: To gather and disseminate information about the health care provided by hospital emergency departments (ED's) and outpatient departments (**OPD's**) to the population of the United States.

Design: A four-stage probability sample design, involving samples of primary sample units (**PSU's**), hospitals with ED's and/or OPD's within **PSU's**, ED's within hospitals and/or clinics. Target universe includes in-person visits by patients to ED's and OPD's of non-federal, short-stay hospitals or those whose specialty is general medical or surgical or children's general. Hospital **staff** is asked to complete patient record forms for a systematic random sample of patient visits occurring during a randomly assigned 4-week reporting period. In 1992, the number of patient record forms completed for ED's was 36,271 and for OPD's was 35,114.

Content: Data are collected on demographic characteristics of the patient, expected source of payment, patient's reason for visit, physician's diagnosis, treatment, **counseling/**education, medications/injections, type of provider seen.

Injury Data: The ED patient record form includes a question on the injury as a major reason for the visit and the cause of injury. The only reference to injury on the OPD record form is whether injury prevention counseling/education was ordered or provided but physician diagnoses are E-coded (external cause of injury), so that injury data are limited to body parts and do not include injuries caused by motor vehicles, falls, firearms, drownings, fires and burns, poisonings and other causes. Domestic violence is not currently identifiable **from** the ED or OPD forms. However, the form was revised for the 1995/1996 survey to include a question about the relationship of the victim to the perpetrator in cases of interpersonal violence or assault.

Utilization of Health Services: Questions included:

- Was patient referred for this visit by another physician?
- Patient's complaint(s), symptom(s), or other reason for visit
- Physician's diagnoses
- Tests, surgical, and nonsurgical procedures and therapies
- Type of counseling/education ordered or provided
- Medications/injections
- Disposition of this visit
- Providers seen this visit

Cost: Data on charges or costs not available. Expected source of payment is obtained.

Work loss: None

Psychological consequences: Visits that are **ICD-9-CM** coded mental disorders.

Law Enforcement: None

Comments: Data on charges or costs are not available and identification of injuries due to domestic violence is not available. Data on average charges available **from** *NMES* (updated) or *Physician Marketplace Statistics* could be applied to estimates **from** other studies of the proportion of OPD and ED visits due to injuries **from** domestic violence.

National Hospital Discharge Survey (NHDS)

Sponsor: Division of Health Care Statistics of the National Center for Health Statistics, Centers for Disease Control and Prevention

Periodicity: Continuous survey to produce annual estimates

Purpose: To provide national estimates of the use of non-federal short-stay hospitals in the United States.

Design: A three-stage stratified sample of general medical and surgical and children's general hospitals regardless of the overall average length of stay of the inpatient population. However, the term "short-stay" continues to be used because 98 percent of hospitals in the NHDS universe fall into this category. The first stage consists of 112 primary sampling units; the second stage consists of noncertainty hospitals selected from the sample PSU's; at the third stage, a sample of discharges from each hospital was selected by a systematic random sampling technique. The final sample in 1993 included 235,000 discharge medical record abstracts from 466 hospitals.

Two data collection procedures were used for the survey-- a manual system of sample selection and abstraction and an automated method. The latter was used with approximately 32 percent of the respondent hospitals and it involved the purchase of data tapes from abstracting service organizations and selected state systems. The system used for coding diagnoses and procedures is the *International Classification of Diseases, 9th Revision, Clinical Modification*, or ICD-9-CM.

Content: Data are collected on patient characteristics, expected source of payment, status/disposition of the patient, final diagnosis, surgical and diagnostic procedures.

Injury data: Although the instructions call for E-codes for discharge diagnoses, not all of the automated systems use E-codes (external cause of injury), so that injury data are limited to body parts and do not include injuries caused by motor vehicles, falls, firearms, drownings, fires and burns, poisonings and other causes.

Utilization of Health Services: The medical abstract includes the following:

- Date of admission
- Date of discharge
- Principal diagnosis and other/additional diagnoses
- Principal and other/additional diagnostic procedures
- Status/disposition of patient:
 - alive- routine discharge/discharge home,
 - left against medical advice,
 - transferred to another short-term hospital,
 - transferred to long term care institution, and other

Costs: Data on charges or costs not available; expected source of payment is obtained.

Work loss: None

Psychological consequences: Discharges that are ICD-9-CM coded mental disorders.

Law Enforcement: None

Comments: Data on charges or costs are not available and identification of hospitalizations due to domestic violence is not possible. Data on average charges available from *Hospital Statistics* or NAMES (updated) could be applied to estimates from other studies of the proportion of hospitalizations due to injuries from domestic violence.

National Medical Expenditure Survey (NMES-II)

Sponsor: Center for General Health Services Intramural Research, Agency for Health Care Policy and Research, Public Health Service, U.S. Department of Health and Human Services

Periodicity: Conducted in 1987; current plans are for annual data collection.

Purpose: To provide extensive information on health expenditures by or on behalf of American families and individuals, the financing of these expenditures, and each person's use of services, insurance coverage, and source of payment. It provides information on the noninstitutionalized population and the population residing in or admitted to nursing homes and facilities for the mentally retarded. Poor and low income families, the elderly, the functionally impaired, and black and Hispanic minorities were oversampled. A separate Medicare Records Component provides claims data on all Medicare beneficiaries included in the household and institutional samples.

Design: The NMES-II Household Survey is based on a national probability sample of the civilian, noninstitutionalized population living in the community. It is a stratified multi-stage area probability design with a total sample of roughly 35,000 individuals in 14,000 households who completed all rounds of data collection. The **12-month** joint core questionnaire/health questionnaire/access supplement response rate for the household component of NMES was 72 percent.

Each family was interviewed four times over a period of 16 months to obtain information about the family's health and health care during calendar year 1987. Baseline data on household composition, employment, and insurance were updated at each interview, and information was obtained on illnesses, use of health services, and health expenditures for each family member. A **fifth** round of interviews was conducted in the spring of 1988 to obtain information on tax filing status and medical deductions of each household.

Information on expenditures was derived in part from the Medical Provider Survey (**MPS**). The scope of MPS data collection included medical services provided by or under the direction of the physician, all hospital events (including visits to emergency rooms and outpatient departments), and home health care. The sample of events fielded in the MPS included all hospital and home events and all events within the scope of the MPS for persons covered by Medicaid and for a **25-percent** sample of Household Survey respondents.

Content: Together, the major components of NMES-II contain information to make national estimates of health status, use of health services, health insurance coverage, expenditures by type of service, and sources of payment. Included is information on the demographic characteristics of the population, disability days and functional status,

medical conditions and injuries, community-based long term care and informal caregiving, access to care, income and housing, taxes, and miscellaneous topics.

Injury Data: Included is a question on whether the condition is an accident/injury.

Utilization of Health Services: NMES-II had a comprehensive, detailed questionnaire on use and cost of medical services including the following:

- Hospital inpatient stays and procedures
- Hospital outpatient department visits
- Medical provider visits
- Dental visits
- Home health visits
- Prescribed medicines
- Other medical expenses
- Community and long term care services

Cost: Medical expenditures for each of the above type of services.

Work loss: Includes work loss, restricted activity days, and bed disability days.

Psychological consequences. Hospital stays and physician visits that are ICD-9-CM coded mental disorders.

Law Enforcement: None

Comments: NMES-II, conducted in 1987, was the comprehensive survey of the population in which data on use of and expenditures for various types of medical expenditures for individuals were obtained. However, identification of injuries due to domestic violence is not available in the survey. The data on per capita medical expenditures by type are available from the survey for 1987. If data on the prevalence of domestic violence and the extent and volume of use of medical services were available from other services, per capita medical expenditures by type from NMES-II could be applied. However, the NMES-II data would need to be updated by application of the medical care component of the Consumer Price Index.

It should be noted that NMES-III is currently in the field, but changes in the design and implementation of the survey are underway. NMES will be designed to produce annual data as part the consolidation of surveys program in the Public Health Service. It is not clear when more current data will be available.

Title of Paper: National Survey of Homeless Assistance Providers and Clients

Author(s): U.S. Bureau of the Census

Publication: Not applicable

Objectives: To provide up-to-date information about the providers of homeless assistance and the characteristics of homeless persons who use services.

Types of Violence: Not applicable

Data Sources: Interview

Methods: 76 geographic areas are included in a national sample: the 28 largest metropolitan areas, 24 randomly selected medium and small metropolitan areas, and another 24 randomly selected nonmetropolitan areas (small cities and rural areas).
Phase one: "provider survey" and will involve interviews of assistance providers in 76 communities. Phase two: "client survey" -- interviews with a sample of persons in sites where assistance is provided. Interviews will take place continuously over a 4-week period in order to obtain a representative sample. Survey will also identify population subgroups and collect limited comparative data on housed persons with very low incomes who also rely on soup kitchens and other emergency assistance.

Measurement: Not applicable

Sample Size and Demographics: Not available (see Critique)

Period of Study: October 1995 - November 1996

Costs: Not available

Prevalence: Not applicable

Incidence: Not applicable

Mental Health Consequences: Not applicable

Critique: This survey will be the first significant national study since 1987 to collect comprehensive information on homeless assistance services and homeless people. The data from this survey will be used to develop effective public policy responses needed to break the cycle of homelessness. Survey will also provide data on HIV/AIDS, tuberculosis, prevalence of drug use, mental illness, and previous episodes of homelessness.
Client survey will produce data on client characteristics at the national level only. The sample size is not large enough to produce estimates of client characteristics at the regional or local levels, nor is it designed to produce a count of homeless people.
Definition of homeless not available from this text How will study estimate percentage of "hidden homeless" (eg, families doubled up in one apartment)?

Survey of Violence Against Women (SVAW)

Sponsor/PI: Center for Policy Research, Denver, Colorado. Funded by the Centers for Disease Control and Prevention

Periodicity: Fall 1995

Purpose: To develop national estimates of violence against women.

Design: National probability sample of 8,000 women generated through random-digit dialing. The survey is conducted by telephone.

Content: Estimates of rates of violence against women including rape, child abuse, and domestic (spousal) violence. Data are collected about assaults, injuries and health care utilization, and criminal justice response. Includes questions about:

- History of family violence
- Domestic (spousal) violence
- Sexual assault
- Household characteristics
- Reporting to police
- Hospital/doctor visits

Injury Data: Includes questions about injuries and consequences of the assault(s).

- Did victim contract a sexually transmitted disease?
- Was victim physically injured?
- Which injuries were sustained?
- If pregnant, what was the outcome of the pregnancy?
- Did assailant use weapons? which ones?
- Did victim receive medical care?

Utilization of Health Services: Questions include:

- Did victim receive emergency room services?
- How many times?
- Did victim receive surgery, bone settings or stitches?
- Which?
- Did victim receive outpatient services?
- How many times?
- Any other operation or surgery for these injuries?
- How many nights was victim in the hospital for these injuries?
- Did victim receive other professional services?
- Did victim receive dental care?
- Did victim receive ambulance services?
- Did victim receive physical therapy?
- Did victim receive home care or visiting nurse services?

How many times did victim receive care for the injury?
How were the costs of treatment paid?
Was there any discussion about the source of the injuries
between any of the medical personnel and
victim?
Did victim ever talk with a psychologist, psychiatrist, or
other mental health professional about the
incident?
How were the costs of these talks paid?

Cost: Questions on medical expenses not asked, but source of payment was asked.

Work loss: Include data on number of days lost from paid employment, child care, household chores, volunteer activities and social/ recreational activities.

Criminal Justice costs: Includes data on whether incident was reported to the police and by whom, criminal charges filed, result of the charges, whether a restraining order was obtained, jail or prison time sentenced for the offender.

Psychological consequences: Questions include utilization of mental health services and source of payment for these services.

Did victim ever talk with a psychologist, psychiatrist, or
other mental health professional about the
incident?
How many times?
How were the costs of these talks paid?

Comments: Provides detailed information on the type of health services received and specific types of medical procedures performed. Since questions about medical expenses were not asked, data on hospitalizations needs to be augmented by hospital expense data available **from** the American Hospital Association. An important advantage of this survey is that it permits one to determine the number of Outpatient and Emergency Department visits, and other medical venues, resulting from episodes of domestic violence. Regarding utilization of social services, survey asks where respondent stayed if she **left** husband/partner (such as a safe house, friends, or homeless shelter), and whether victim or husband/partner ever received counseling (for the husband/partner, was counseling **court-**mandated?)

Uniform Crime Reports for the United States (UCR)

Sponsor: Federal Bureau of Investigation

Periodicity: Annual

Purpose: To generate a reliable set of criminal statistics; to provide a detailed, nationwide view of crime based on statistics from state and local law enforcement agencies.

Design: Collects information on 8 crimes reported to law enforcement agencies: homicide, rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, and arson. These crimes serve as an index for gauging fluctuations in the overall volume and rate of crime, and are known as the Crime Index. UCR data are compiled from monthly law enforcement reports made directly to the FBI or to centralized state agencies that then report to the FBI, and are from 44 states and the District of Columbia. UCR rates are mostly per-capita (number of crimes per 100,000 persons).

Content: Reports crime counts and trends, data on arrested persons (age, sex, race), law enforcement personnel (including numbers of officers killed or assaulted), characteristics of homicides (including age, sex, race of victims and offenders, victim-offender relationships, weapons used, and circumstances surrounding the homicides).

Injury Data: None

Utilization of Health Services: None

Cost: None

Work loss: None

Psychological consequences: None

Law Enforcement: Includes numbers of law enforcement personnel, response of law enforcement to the crimes, characteristics of law enforcement personnel and civilian employees by geographic region, sex, and population groups, and law enforcement officers killed and assaulted in the line of duty.

Comments: Report provides detailed data of murders, including victims-offender relationships, and provides estimates of murders within families and murders due to "romantic triangles and lovers' quarrels" as percentages of total murders. Survey states that among all female murder victims, 29% were killed by husbands or boyfriends, and 3% of the male victims were killed by wives or girlfriends. However, UCR does not measure domestic violence directly through the other seven crimes.